

Draft Environmental Assessment

Communication Tower

Permian Basin Regional Planning Commission

Andrews, Texas

PROJECT # 2010-SS-T0-0008 (9711)

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**FEMA**

**Federal Emergency Management Agency**  
**U.S. Department of Homeland Security**  
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## List of Acronyms and Abbreviations

AFR	American Flood Research, Inc.
AGL	Above Ground Level
APE	Area of Potential Effect
BMP	Best Management Practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
CZMP	State Coastal Zone Management Plans
DHS	Department of Homeland Security
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FPPA	Farmland Protection Policy Act
FONSI	Finding of No Significant Impact
HSGP	Homeland Security Grant Program
MBTA	Migratory Bird Treaty Act
NAAQS	National Ambient Air Quality Standard
NAD83	North American Datum of 1983
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NO <sub>2</sub>	Nitrogen Dioxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O <sub>3</sub>	Ozone
OSHA	Occupational Safety and Health Administration
Pb	Lead
PM <sub>10</sub> and PM <sub>2.5</sub>	Particulate matter
SHPO	State Historic Preservation Officer
SO <sub>2</sub>	Sulfur Dioxide
TCEQ	Texas Commission on Environmental Quality
THPO	Tribal Historic Preservation Officer
USACE	United States Army Corps of Engineers
USEPA	Environmental Protection Agency
USFWS	United States Department of the Interior, Fish and Wildlife Service
USGS	United States Geological Survey
WOUS	Waters of the United States

## **1.0 INTRODUCTION**

This Draft Environmental Assessment (EA) provides a review of the potential environmental impacts associated with grant funds issued by the Homeland Security Grant Program (HSGP). The HSGP is to assist State, local, tribal, and nongovernmental agencies in developing interoperable communications within the P25 VHF trunked system build-out. As a condition of the HSGP, HSGP grantees must comply with all relevant Federal legislation; including the National Environmental Policy Act (NEPA), therefore this project requires a site-specific EA.

The Department of Homeland Security (DHS)/Federal Emergency Management Agency (FEMA) has specified that HSGP-funded projects must be used for projects that would improve communications in areas at high risk for natural disasters and in urban and metropolitan areas at high risk for threats of terrorism, and should include pre-positioning or securing of interoperable communications for immediate deployment during emergencies or major disasters. Investments that received HSGP funding range from large-scale infrastructure build-outs such as tower construction to governance-related initiatives, but not limited to multijurisdictional strategic planning.

The NEPA requires that Federal agencies evaluate the environmental consequences of proposed actions before deciding to fund an action. The intent of NEPA is to protect, restore, or enhance the environment through well-informed decision making. The President's Council on Environmental Quality (CEQ) has developed a series of regulations for implementing the NEPA. These regulations are included in Title 40 of the Code of Federal Regulations (CFR), Parts 1500–1508. An Environmental Assessment (EA) includes an evaluation of alternative means of addressing the purpose and need for Federal action and a discussion of the potential environmental consequences of the proposed Federal action. The EA provides the evidence and analysis to determine whether the proposed Federal action will have a significant adverse effect on the human environment. An EA related to a FEMA program must be prepared according to the requirements of the Stafford Act and 44 CFR Part 10. This section of the Federal Code requires that the FEMA take environmental considerations into account when authorizing funding or approving actions. This EA was conducted in accordance with both CEQ and FEMA regulations for NEPA. FEMA will use the findings in this EA to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

## **2.0 PURPOSE AND NEED**

The Permian Basin Regional Planning Commission's objective is to have complete communication coverage throughout the area. The current public safety telecommunications infrastructure is insufficient to meet this need. This lack of radio coverage adversely impacts ability to maintain radio communication, which is directly related to ability to provide emergency services and respond to emergency events. The specific need addressed in this proposal is to provide sufficient system capability to achieve radio coverage throughout Andrews County. The

Purpose of the HSGP is to improve interoperability and reliability in the nation's communications and information systems infrastructure by assisting public safety agencies in performing the following:

- Conducting Statewide or regional planning and coordination
- Supporting the design and engineering of interoperable emergency communications systems
- Supporting the acquisition or deployment of interoperable communications equipment or systems
- Establishing and implementing a strategic technology reserve to pre-position or secure interoperable communications in advance so they may be immediately deployed in an emergency or major disaster

There is currently not an existing communications and information systems infrastructure which meets the coverage and security needs of Andrews and surrounding counties. As a result, there is a need for a communications and information system infrastructure which will:

- Increase the coverage area for emergency responders connected through the communications and information systems of neighboring counties
- Provide updated equipment to support new frequencies to improve and expand voice and data coverage
- Facilitate reliable interoperable communications among first responder organizations
- Enhanced security and facility control
- Use cost-effective measures, via leasing agreements and systems sharing

### **3.0 ALTERNATIVES**

NEPA requires the investigation and evaluation of reasonable project alternatives, including impacts to the natural and human environment as part of the planning process. This EA addresses two alternatives, the No Action alternative and the Proposed Action.

#### **3.1 No Action Alternative**

Under the No Action Alternative, Andrews County would continue to rely on existing communication infrastructure which does not provide sufficient coverage throughout the area or county. This would leave emergency response unchanged and results in a lower level of overall public safety than the Proposed Alternative as Andrews County and the surrounding counties emergency responders would remain at risk due to lack of radio coverage. Lack of adequate communication directly impacts command, control, rescue, event analysis, and other critical operations. The No Action Alternative would not address the needs for Andrews County and surrounding areas.

### **3.2 Proposed Action Alternative**

The Proposed Action is the construction of a 480-foot guyed wire telecommunications tower that will be located at 9435 East State Highway 115 approximately 20 miles northeast of Andrews, Texas on Highway 115 in Andrews County, Texas at 32.503778 Latitude and -102.278250 Longitude North American Datum of 1983 (NAD83) (Figure 1), and shown on the United States Geological Survey (USGS) McKenzie Lake SE, Texas 7.5 Minute Series Topographic Map dated 1970 (Figure 2). The area surrounding the proposed undertaking is grassland located in a portion of the Southern High Plains in Andrews County, Texas.

The Andrews Tower site consists of a proposed 480-foot guyed telecommunication tower and associated equipment to be located on 50-foot by 50-foot grassland covered parcel. The proposed telecommunication compound will include: one 12-foot by 16-foot equipment shelter, a standalone emergency backup generator on a 5-foot by 5-foot pad, and associated 5-foot by 10-foot propane tank, and control utility board as shown in Figure 3. Anchors will be placed at four corners for the guyed wires. There will be four (4) sets of nine (9) guy wires for a total of 36 wires. The tower's surface impact area will be less than 0.25 acres. The proposed Andrews Tower site will be a part of a trunking system associated with other towers in the neighboring counties of Gaines, Dawson, Martin, Midland, Ector and Winkler.

Andrew County will have a 10-year lease on the proposed tower site located on property owned by the University of Texas Lands. The county will have unrestricted access for the term of the lease with the option of renewing the lease every 10 years. An aerial photograph showing the site location is included (Figure 4) (USDA 2004).

The proposed Andrews Tower site will allow for the following:

- Increased coverage area for emergency responders connected through the communications and information systems of neighboring counties
- New technology which will support frequencies which improve/expand voice and/or data coverage
- Improve communications among security/emergency organizations
- Enhance security and facility control
- Use cost-effective measures, via leasing agreements and systems sharing

### **3.3 Alternatives Considered But Not Carried Forward**

Multiple potential alternative sites were examined for the Proposed Action. However, within this region, there are limited sites that are available and suitable for tower siting. There are no other existing tower facilities that would be suitable for structural retrofitting or equipment upgrades.

None of these alternatives could accommodate the future needs of Andrews County and none of the surrounding areas met the necessary pre-screen requirements. Therefore, these alternatives were dismissed and are not discussed any further in this document.

#### **4.0 AFFECTED ENVIRONMENT AND POTENTIAL IMPACTS**

This section discusses the existing environmental conditions at the proposed site including descriptions of the physical, biological, and socioeconomic resources throughout the general area and the proposed action site. The characterization of existing conditions provides a baseline for assessing the potential environmental impacts from activities associated with the proposed action.

##### **4.1 Physical Resources**

###### **4.1.1 Geology and Soils**

The Proposed Action is located on the geologic formation identified as the Windblown cover sand consisting of fine-to-medium-grained quartz, silty, calcareous, caliche nodules common, massive, grayish red; thickness up to 10 feet as shown in Figure 5. The soil composition of the Andrews Tower site is listed as Jalmar-Penwell association, undulating which consists of well drained, fine sand, sandy clay loam (Geologic Atlas of Texas, Hobbs Sheet, 1976) as shown in Figure 6. These soils are found on sand sheets. Slopes range from 1 to 8 percent (Natural Resource Conservation Service 2011)

This area of Andrews County lies in the Southern High Plains, with the Central High Plains to the far north and North Central Plains to the east. Parts of this region are some of the hottest and driest in the state. Vegetation in the Southern High Plains includes prairie grassland, small bushes and scrub-brush. The area is predominantly prairie grasslands slightly interspersed with brush. Land use in the region is mostly grassland with medium to long grass and low bushes and scrub brush.

The Farmland Protection Policy Act (FPPA) (p.l. 97-98, Sec. 1539-1549; 7 U.S.C. 4201, et seq.) is intended to minimize the impact Federal programs have on unnecessary and irreversible conversion of farmland to nonagricultural uses. FPPA assures that Federal programs are administered to be compatible with various programs to protect farmland. For the purpose of FPPA, farmland definition includes prime farmland, unique farmland, and land of statewide or local importance; it is important to note that these definitions include land such as forestland, pastureland, or other land that is not in current production.

The proposed project site is not considered prime farmland. The proposed action will not significantly impact geology or soils at the site. The minor construction activity will incorporate practices to minimize soil erosion during the construction/erection of the communication tower,

including best management practices such as minimization of area of disturbance, silt fencing and/or straw bales, and proper staging of equipment.

Geology and soils will not be impacted by the No Action Alternative as no construction activities would occur.

#### **4.1.2 Air Quality**

Air quality is measured by the concentration of various pollutants in the atmosphere, usually expressed in units of parts per million (ppm) or micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Acceptable levels for six criteria pollutants in ambient air have been established as National Ambient Air Quality Standards (NAAQS). These standards were set by the federal U.S. Environmental Protection Agency (USEPA) for the maximum levels of air pollutants that can exist in the outdoor air without unacceptable effects on human health or the public welfare. The six criteria air pollutants include carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and lead (Pb). PM<sub>10</sub> and PM<sub>2.5</sub> are acronyms for particulate matter consisting of particles smaller than 10 and 2.5 micrometers, respectively.

According to the Texas Commission on Environmental Quality (TCEQ), Andrews County is classified as in attainment and currently meets NAAQS for all six criteria pollutants (TCEQ 2008). The proposed project meets established NAAQS, air permits are not required for new construction or refitting construction for telecommunication towers that include the following activities: building a road, preparing land to erect a tower, temporary small-scale ground disturbance typically associated with new and refitting tower construction.

The proposed action will include short-term construction activities, including soil excavation and grading. These activities are likely to create fugitive dust; however best management practices (BMP) would be used to minimize dust. These BMPs include spraying water to minimize dust, limiting the area of uncovered soil to the minimum needed for each activity, siting of staging areas to minimize fugitive dust, using a temporary gravel cover, limiting the number and speed of vehicles on the site, and covering trucks hauling dirt. BMPs for construction vehicle and equipment emissions include limiting vehicle idling time, and conducting proper vehicle maintenance. Air emissions from construction activities would be temporary and would cease once construction is completed. However, episodic impacts to air quality could occur from the proposed standalone emergency backup generator. Impacts to air quality are anticipated to be minimal because the emergency backup generator will run on propane fuel that produces negligible greenhouse gas emissions.

Air quality would not be impacted by the No Action Alternative as no construction activities would take place and no air emissions would occur.

## **4.2 Water Resources**

The United States Army Corps of Engineers (USACE) is responsible for permitting and enforcement functions dealing with building into or discharging dredge or fill material into Waters of the United States (WOUS). USACE regulations for building or working in navigable WOUS are authorized by the Rivers and Harbors Act of 1899. These regulations go together with Section 404 of the Clean Water Act (CWA), which establishes the USACE permit program for discharging dredged or fill material into WOUS.

Field reconnaissance performed in February, 2011, did not observe defined surface drainage features, such as rivers, creeks, ponds, etc., on or immediately adjacent to the subject property.

### **4.2.1 Surface and Ground Water Quality**

The CWA, as amended, is the primary Federal law in the United States regulating water pollution (P.L. 92-500, 33 U.S.C. §1251). The CWA regulates water quality of all discharges into “waters of the United States.” Both wetlands and “dry washes” (channels that carry intermittent or seasonal flow) are considered “waters of the United States.” Administered by USEPA, the CWA protects and restores water quality using both water quality standards and technology-based effluent limitations. The USEPA publishes surface water quality standards and toxic pollutant criteria at 40 CFR Part 131.

The CWA also established the National Pollutant Discharge Elimination System (NPDES) permitting program (Section 402) to regulate and enforce discharges into WOUS. The NPDES permit program focuses on point-source outfalls associated with industrial wastewater and municipal sewage discharges. Congress has delegated to many States the responsibility to protect and manage water quality within their legal boundaries by establishing water quality standards and identifying waters not meeting these standards. States also manage the NPDES Program.

According to the USGS McKenzie Lake SE, Texas 7.5 Minute Series Topographic Map dated 1970 (Figure 2), and the USEPA Region 6 Map of Sole Source Aquifers (USEPA Sole Source Aquifers 2011) (Figure 7), the Proposed Action is located in a grassland area of Andrews County, Texas. The site is approximately 3,000 feet above mean sea level with no indications of wetlands, floodplains, coastal management zones, and wild or scenic rivers noted in the reviewed databases and maps. Annual rainfall in this area is approximately 15 inches per year.

The nearest water body is a livestock tank located approximately 3,000 feet northwest of the site identified in the USGS Topographic Map (Figure 2) and the 2008 aerial photograph (Figure 4).

Under the Proposed Action, potential impacts to surface or ground water resources would be minimal, considering that there are no nearby water resources from the proposed site and the

relatively limited size of the Andrews Tower footprint of less than 0.25 acres ground disturbance, construction activities are unlikely to result in a significant amount of erosion.

The proposed action will include short-term construction activities, including soil excavation and grading. The minor construction activity will incorporate best management practices to minimize water quality impacts during the construction/erection of the communication tower; such as minimization of area of disturbance, silt fencing and/or straw bales, and proper staging of equipment. Once construction activities are completed, there would be no anticipated water quality impacts to either surface water or groundwater.

Neither surface or ground water quality would be impacted by the No Action Alternative as no construction activities would take place and no impacts to water quality would occur.

#### **4.2.2 Wetlands**

Under the CWA (40 CFR § 230.3), wetlands are defined as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.” Potential wetlands under the jurisdiction of the USACE include waterways, lakes, streams, and natural springs.

A review of the United States Department of the Interior, Fish and Wildlife Service (USFWS) National Wetlands Inventory map McKenzie Lake SE, Texas, 1995 (USFWS NWI 1995), indicated that wetlands are not located on the site (Figure 9). Furthermore, at the time of the site reconnaissance, there was no evidence of potential wetlands, hydric soils or hydrophytic vegetation at the site. A review of the relevant soil survey map did not indicate hydric soils at the site. Based on the findings of this review, the proposed action will result in no effects to wetlands.

Wetlands would not be impacted by the No Action Alternative as no construction activities would take place and no impacts to wetlands would occur.

#### **4.2.3 Floodplain**

Floodplains provide numerous beneficial environmental functions including flood abatement, stream flow mediation, filtering, and water quality enhancement. Executive Order (EO) 11988, Floodplain Management, requires federal agencies to take action to minimize occupancy and modification of the floodplain. Specifically, EO 11988 prohibits federal agencies from funding construction in the 100-year floodplain (500-year floodplain for critical facilities) unless there are no practicable alternatives. Flood Insurance Rate Maps (FIRMs) are used to identify the regulatory 100-year Floodplain for the National Flood Insurance Program (NFIP).

Consistent with EO 11988, FIRMs were examined on-line during the preparation of this EA and according to the Flood Insurance Rate Map (FIRM) on-line database and information from American Flood Research, Inc. (AFR) (Appendix B), the site is in a portion of Andrews County which is not mapped by FEMA on a NFIP map (FIRM 2011). Based on the lack of floodplain data for the area, AFR reported that the site has no flood zone designation. The proposed site is located on a parcel of grassland with sparse brush of the Southern High Plains at 3,000 feet of elevation. Surface runoff is gently toward the south/southeast and the topography of the surrounding area is best described as grassland. The nearest water body is a livestock tank located approximately 3,000 feet northwest of the site. Based on this information, the Proposed Action is not anticipated to affect areas of the 100-year floodplain, and there would be no impact to floodplains.

Under the No Action alternative, construction activities would not take place and there would be no potential impacts to floodplains.

### **4.3 Coastal Resources**

The Coastal Zone Management Act of 1972 (CZMA) (16 U.S.C. §1451) provides States with the authority to determine whether activities of governmental agencies are consistent with federally approved State Coastal Zone Management Plans (CZMP). The intent of the CZMA is to prevent any additional loss of living marine resources, wildlife, and nutrient-enriched areas; alterations in ecological systems; and decreases in undeveloped areas available for public use.

The Proposed Action is located in a grassland area of Andrews County, Texas approximately 295 miles northwest of the nearest coastal management zone. The site is approximately 3,000 feet above mean sea level. Based on the findings of this review, the proposed action will result in no effects to coastal management zones.

Under the No Action alternative, construction activities would not take place and there would be no potential impacts to coastal management zones.

### **4.4 Biological Resources**

#### **4.4.1 Threatened and Endangered Species and Critical Habitat**

Under the Endangered Species Act of 1973, Federal agencies must review proposed actions to ensure they are not likely to jeopardize the continued existence of a listed species or destroy or adversely modify its critical habitat.

The USFWS Division of Endangered Species County Website listed three species in Andrews County (USFWS 2011). However, none of the species have been listed as Threatened or Endangered. The three species are; the bald eagle (*Haliaeetus leucocephalus*) with a listed status of Recovery, the lesser prairie-chicken (*Tympanuchus pallidicinctus*) with a listed status of Candidate, and the sand dune Lizard (*Sceloporus arenicolus*) with a listed status of Proposed

Endangered. None of the habitats for these species were observed on the site. The USFWS was contacted on March 18, 2011. A stamped "No Action" response from the USFWS was received on March 28, 2011. "No Action" is defined by the USFWS as no known Threatened or Endangered species are known to occur in the project area. The USFWS submittal and list of species is provided (Appendix C).

None of the characteristic habitats were identified on the tower site. No burrows, nests, or other signs of threatened and endangered species habitat were readily observable at the time of the reconnaissance. For these reasons, it is anticipated that the proposed tower construction will not affect listed or proposed protected species or critical habitats.

Under the No Action alternative, construction activities would not take place and there would be no potential impacts to listed or proposed protected species or critical habitats.

### Migratory Birds

The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. §703) was first enacted to implement the 1916 convention between the United States and Great Britain for the protection of birds migrating between the U.S. and Canada, offering much-needed protection to many bird species during a time when commercial trade in birds and their feathers was popular. The statute makes it unlawful to pursue, hunt, take, capture, kill or sell birds listed in the statute as "migratory birds", and does not discriminate between live or dead birds and also grants full protection to any bird parts including feathers, eggs and nests. The MBTA is the primary law that affirms or implements the nation's commitment to four international conventions (with Canada, Japan, Mexico, and Russia) for the protection of a shared migratory bird resource. Each convention protects selected species of birds that are common to both countries (e.g., they occur in both countries at some point during their annual life cycle). The potential impact to property owners can exist when migratory birds seek respite within trees or on buildings considered private property.

USFWS's Division of Migratory Bird Management established several initiatives in the past decade to research collisions of birds with communication towers. In 1999, USFWS established the Communication Tower Working Group, composed of government, industry, and academic groups to study and determine tower construction approaches that prevent bird strikes.

Andrews County is located within a portion of the Central Flyway for migratory birds (USFWS 2011). Fall and spring migrants use the region for temporary stops during travel between the northern and southern hemispheres. Best management practices should be implemented for avoiding harassment and harm to migratory birds during construction activities. Impacts on migratory birds could be expected as a result of collision with operating towers, antennae, and other tall structures, particularly during periods of low visibility and as a result of tower lighting that might be distracting to some species. The probability of collision is difficult to determine programmatically due to the range of variables that affect the potential for collision and the lack of conclusive data on the causes of collision. The following 12 guidelines of the USFWS *Service*

*Guidelines for Recommendations on Communications Tower Sites, Construction, Operation, and Decommissioning were evaluated with regards to the proposed project.*

1. Any company/applicant/licensee proposing to construction a new communications tower is strongly encouraged to collocate the communications equipment on an existing communication tower or other structure (e.g., billboard, water tower, or building mount). Depending on tower load factors, from 6 to 10 providers may collocate on an existing tower.

*Response: The proposed site is located in a rural area. An existing tower or other structure is not located on or near the proposed project area. Therefore, a collocation alternative has been dropped from consideration.*

2. If collocation is not feasible and a new tower or towers are to be constructed, communications service providers are strongly encouraged to construct towers no more than 199 feet above ground level (AGL), using construction techniques which do not require guy wires (e.g., use a lattice structure, monopole, etc). Such towers should be unlighted if Federal Aviation Administration (FAA) regulations permit.

*Response: The proposed tower height of 480-feet is requested in order fill a gap in the coverage in the area and to minimize the number of additional towers in the area. The alternative of multiple shorter towers could potentially increase the cumulative effects to soil, vegetation, wetlands, wildlife habitat, threatened and endangered species and/or migratory birds. A shorter tower was considered, but after further research it was determined that this alternative would not meet and/or overlap the coverage with the trunking system associated with other towers in the neighboring counties of Gaines, Dawson, Martin, Midland, Ector and Winkler. For these reasons, a shorter tower alternative has been dropped from consideration. Lighting and guy wires are discussed below.*

3. If constructing multiple towers, providers should consider the cumulative impacts of all of those towers to migratory birds and threatened and endangered species as well as the impacts of each individual tower.

*Response: The construction of a 480-foot communications tower may alleviate the need for future development of additional towers for the area that are of a lower height. The alternative of constructing multiple shorter towers could potentially increase the cumulative effects to soil, vegetation, wetlands, wildlife habitat, and threatened and endangered species, as well as migratory birds.*

4. If at all possible, new towers should be sited within existing “antenna farms” (clusters of towers). Towers should not be sited in or near wetlands, other known bird concentration areas (e.g., state or Federal refuges, staging areas, rookeries), in known migratory or daily movement flyways, or in habitat of threatened or endangered species. Tower should not be sited in areas with a high incidence of fog, mist, and low ceilings.

*Response: The proposed tower is located approximately 20 miles northeast of Andrews, Texas on Highway 115 in Andrews County, Texas. There are no clusters of towers located within an approximate 25 to 30 mile radius of the proposed site.*

5. If taller (>199feet AGL) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA should be used. Unless otherwise required by the FAA, only white (preferable) or red strobe lights should be used at night, and these should be the minimum number, minimum intensity, and minimum number of flashes per minute (longest duration between flashes) allowable by the FAA. The use of solid red or pulsating red warning lights at night should be avoided. Current research indicates that solid or pulsating (beacon) red lights attract night-migrating birds at a much higher rate than white strobe lights. Red strobe lights have not yet been studied.

*Response: Based upon the proposed tower height of 480-feet, it is recommended that the Permian Basin Regional Planning Commission use light systems with minimum intensity, maximum off-phased white strobe lighting according to FAA regulations. To minimize adverse affects on migratory birds, the tower will use white strobe lights during the daytime hours and red strobe lights during the evening hours.*

6. Tower designs using guy wires for support which are proposed to be located in known raptor or waterbird concentration areas or daily movement routes, or in major diurnal migratory bird movement routes or stopover site, should have daytime visual markers on the wires to prevent collisions by these diurnally moving species. (For guidance on markers, see *Avian Power Line Interaction Committee (APLIC). 1994. Mitigating Bird Collisions with Power Lines: The State of the Art in 1994. Edison Electric Institute, Washington, D.C., 78 pp*, and *Avian Power Line Interaction Committee (APLIC). 1996. Suggested Practices for Raptor Protection on Power Lines. Edison Electric Institute/Raptor Research Foundation, Washington, D.C., 128 pp*. Copies can be obtained via the Internet at <http://www.eei.org/resources/pubcat/envir/>, or by calling 1-800-334-5453.

*Response: According to Permian Basin Regional Planning Commission, the proposed tower will contain three guyed wires instead of the typical six guyed wires used to support towers of this height. The decrease in the number of guyed wires should aid in decreasing and/or preventing bird strikes. Adding bird diverters to the guy wires was dismissed due to their potential to comprise the structural integrity of the tower.*

7. Towers and appendant facilities should be sited, designed and constructed so as to avoid or minimize habitat loss within and adjacent to the tower "footprint". However, a larger tower footprint is preferable to the use of guy wires in construction. Road access and fencing should be minimized to reduce or prevent habitat fragmentation and disturbance, and to reduce above ground obstacles to birds in flight.

*Response: According to Permian Basin Regional Planning Commission, the prefabricated equipment shelter will be placed within the footprint of the proposed tower adjacent to the base. Furthermore, due to decrease in guyed wire supports to be used for the tower, the footprint will be reduced by fifty percent. It is recommended that construction materials, equipment and staging areas be located/stored within the proposed project footprint in order to avoid and/or minimize impacts to undisturbed native vegetation.*

8. If significant numbers of breeding, feeding, or roosting birds are known to habitually use the proposed tower construction area, relocation to an alternate site is recommended. If this is not an option, seasonal restrictions on construction may be advisable in order to avoid disturbance during periods of high bird activity.

*Response: Relocation to an alternate site is not a viable option for the proposed project. The location of the proposed project is the most viable location for overlapping the coverage with the trunking system associated with other towers in the neighboring counties. It is recommended that potential project disturbances, including noise, be minimized and, if possible, be scheduled to occur outside of periods of high bird activity.*

9. In order to reduce the number of towers needed in the future, providers should be encouraged to design new towers structurally and electrically to accommodate the applicant/licensee's antennas and comparable antennas for at least two additional users (minimum of three users for each tower structure), unless this design would require the addition of lights or guy wires to an otherwise unlighted and/or unguyed tower.

*Response: According to Permian Basin Regional Planning Commission, the proposed tower will likely accommodate comparable antennas for at least two additional users. The tower will be primarily utilized by security and emergency service entities.*

10. Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the site.

*Response: The newly fabricated equipment shelter to be located within the site boundary near the base of the proposed tower will contain down-shielded lighting in an attempt to keep light within the site boundary.*

11. If a tower is construction or proposed for construction, Service personnel or researchers from the Communication Tower Working Group should be allowed access to the site to evaluate bird use, conduct dead-bird searches, to place net catchments below the towers but above the ground, and to place radar, Global Positioning System, infrared, thermal imagery, and acoustical monitoring equipment as necessary to assess and verify bird movements and to gain information on the impacts of various tower sizes, configurations, and lighting systems.

*Response: It is recommended that Service personnel or researchers from The Communication Tower Working Group coordinate with the property owner, tower owner and local security and emergency service entities prior to accessing the proposed site.*

12. Towers no longer in use or determined to be obsolete should be removed within 12 months of cessation of use.

*Response: The proposed project is for a new 480-foot tower. The site does not contain any prior tower structures or equipment.*

Adverse impacts on birds resulting from collision generally occur during low visibility conditions at lighted towers supported by guy wires and present greater collision risk than freestanding towers or buildings. Visibility for the Andrews County area, on average, is greater than ten miles. It is not anticipated that the Proposed Action will have adverse impacts on migratory birds.

Under the No Action alternative, construction activities would not take place and there would be no potential impacts to listed or migratory birds.

## **4.5 Cultural and Historic Resources**

### **4.5.1 Historic Properties**

Historic and cultural resources are sites, structures, buildings, districts, or objects, associated with important historic events or people, demonstrating design or construction associated with a historically significant movement, or with the potential to yield historic or prehistoric data, that are considered important to a culture, a subculture, or a community for scientific, traditional, religious, or any other reason (Texas Historical Commission Sites Atlas 2011). Typically, historic and cultural resources are subdivided into the following categories:

- **Archaeological resources.** This includes prehistoric or historic sites where human activity has left physical evidence of that activity but few aboveground structures remain standing.
- **Architectural resources.** This includes buildings or other structures or groups of structures that are of historic or aesthetic significance.
- **Native resources.** These include resources of traditional, cultural, or religious significance to a Native American Tribe, Native Hawaiian, or Native Alaskan organization.

There are multiple Federal regulations that protect historic and cultural resources. The National Historic Preservation Act of 1966 (NHPA) (P.L. 89–665, 16 U.S.C. §470) directs the Federal

Government to consider the effects of its actions on historic and cultural resources under Section 106 through a four-step compliance process. It is noteworthy, however, that the law does not necessarily mandate preservation but does mandate a carefully considered decision making process. The four steps of the Section 106 compliance process are the following:

1. **Establish whether the Proposed Action constitutes an undertaking.** Per 36 CFR 800.16, an undertaking is an action funded in whole or in part under the direct or indirect jurisdiction of a Federal agency. If the Proposed Action is an undertaking, the appropriate State Historic Preservation Office (SHPO) or Tribal Historic Preservation Office (THPO) and other consulting parties (stakeholders) are identified.
2. **Identify National Register-listed or eligible properties.** Eligible historic properties in the geographic area of the Proposed Action are identified and evaluated for significance, including properties potentially eligible or listed with the National Register of Historic Places (NRHP) that may be affected by the Proposed Action.
3. **Assess affects of Proposed Action on eligible historic properties.** If the assessment determines no historic properties or no adverse effect to eligible historic properties, the SHPO/THPO and other consulting parties are informed, and the compliance process stops at this step. If the assessment determines actual or potential adverse effect to eligible historic properties, the SHPO/THPO and other consulting parties are notified through a letter and supporting documentation.
4. **Resolve adverse effects to eligible historic properties through consultation with the SHPO/THPO and Advisory Council on Historic Preservation (ACHP), as necessary.**

The project is located on a parcel of grassland with sparse brush, at 3,000 feet elevation, in the west Texas plains region of Andrews County with no other structures located in the immediate area. Historic, cultural, or tribal resources were not identified within a 1.5-mile Area of Potential Effect (APE) of the Proposed Action based on a review of information available from NRHP, the Texas SHPO, and the Texas Archaeological Site Files. The Texas Historic Commission – Site Atlas is shown in Figure 8.

Consultation with the Texas SHPO was conducted to determine whether the construction of the Andrews Tower and installation associated antennae, microwave links, and infrastructure may generate any short-term or long-term indirect impacts to historic and cultural resources and within the viewshed of any historic and cultural resources. Information available on the Texas SHPO website indicated no state-surveyed historic places were located within the APE. A public notice was listed in the “Andrews County News” on March 19, 2011 to allow for public comments on the effect of the proposed project on historic properties within the viewshed of the proposed tower. No comments pertaining to the public notice were received.

Federal Communications Commission (FCC) Form 620 with attachments was submitted to the SHPO on March 17, 2011. A response dated March 29, 2011 indicated that the SHPO

concluded with the recommendations and determined that the proposed project should have no effect on properties listed, no further evaluation is required and the project may proceed (Appendix C). Based on these findings, FEMA has determined that the proposed action will have no effect on cultural and historic resources.

In the event that archeological deposits, including any Native American pottery, stone tools, bones, or human remains, are uncovered, the project shall be halted and the applicant shall stop all work immediately in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. All archeological findings will be secured and access to the sensitive area restricted. The applicant will inform FEMA immediately, FEMA will consult with the SHPO or THPO, and Tribes and work in sensitive areas cannot resume until consultation is completed and appropriate measures have been taken to ensure that the project is in compliance with the National Historic Preservation Act.

Under the No Action alternative, construction activities would not take place and there would be no potential impacts to cultural and historic resources.

#### **4.5.2 Tribal Coordination**

Section 106 of the NHPA also requires coordination with Federally-recognized Native American Indian tribes who may have potential cultural interests in the project area, and acknowledges that tribes may have interests in geographic locations other than their seat of government. The FCC has established a Tower Construction Notification System (TCNS) that allows for Federally recognized Tribes and Native Hawaiian Organizations (NHO) to respond to grantees via email.

The following groups were contacted: Southern Ute Tribe, Ysleta del Sur Pueblo, Comanche Nation, Wichita and Affiliated Tribes, Tonkawa Tribe, and Mescalero Apache Tribe. All of the groups indicated by letter, email or by telephone contact that they had no interest in the site (Appendix B).

Under the No Action alternative, construction activities would not take place and there would be no potential impacts to tribal resources

## **4.6 Socioeconomic Resources**

Andrews County, Texas is located in a rural western portion of the State of Texas. It is bordered on the north by Gaines and Dawson Counties, on the east by Martin County, on the south by Kermit, Ector and Midland Counties, and the west by Lea County, New Mexico. In 2009, the U.S. Census Bureau estimated Andrews County's population to be 14,057 (Demographic Fact Finder 2011). The county has a land area of 1,500.64 square miles.

### **4.6.1 Environmental Justice**

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) requires that Federal agencies focus on achieving environmental justice by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States.

The proposed action will result in significant upgrades to and enhancements of the interoperable communication capability within Andrews County and will address radio coverage issues throughout the county, thus benefitting the entire population.

Under the No Action Alternative, Andrews County would continue to rely on existing communication infrastructure which does not provide sufficient coverage throughout the area. This would leave emergency response unchanged and results in a lower level of overall public safety than the Proposed Alternative as Andrews County emergency responders would remain at risk due to lack of radio coverage. Lack of adequate communication directly impacts command, control, rescue, event analysis, and other critical operations.

### **4.6.2 Noise**

Because of construction-related activities, there would be a temporary increase in localized noise generated during the Andrews Tower construction activities. Construction activities for new infrastructure may result in short-term, negligible adverse impacts. Noise from the construction activities will vary depending on the distance from the source of the noise. The noise levels generated by construction equipment would vary substantially depending on the type of equipment used, operations schedule, and condition of the project area. In addition to daily variations in construction activities, major construction for new infrastructure would be accomplished in several different stages, with each stage having a specific equipment mix for the work to be accomplished. The use of heavy equipment during construction activities may result in short-term minor adverse impacts on the noise environment, especially if noise-sensitive populations are adjacent to a proposed site. Typically, construction-related noise generation would last only for the duration of construction activities and occur during normal working hours (i.e., 7:00 a.m. to 5:00 p.m.), when noise is tolerated better because of the

masking effect of background noise, with equipment being shut off when not in use. Evening noise levels would likely drop to ambient noise levels of the project area.

It is anticipated that noise impacts from the Proposed Action construction activities would be temporary and would not exceed typical noise levels. Noise levels dBA at 50 feet from the source would be no greater than 85 dBA for no more than four to six continuous hours per day over a 10 to 35 day period (USEPA 1974). To reduce noise levels during construction, construction activities would occur during normal working hours (i.e., 7:00 a.m. to 5:00 p.m.). Construction-related noise impacts from the Andrews Tower project would not be significant.

Under the No Action alternative, construction activities would not take place and there would be no potential impacts to noise.

#### **4.6.3 Traffic/Transportation Network**

Construction-related activities, heavy equipment and materials that may be needed for site access and site preparation would not pose a significant impact to the transportation network or cause a significant increase in traffic for the area. Construction of the Proposed Action may require numerous truck trips to haul materials to the project site. The number of construction-related trips and the frequency and duration of impacts would be dependent on the location, nature, and scale of the project. Since the Andrews Tower site is a 480-foot guyed tower, the surface impact less than 0.25 acres in size of grassland with sparse brush; a significant amount of construction related traffic is not required to complete the project.

Potential impacts to transportation and traffic are expected to be low, provided appropriate planning and implementation actions are taken. Existing roads would be used to the maximum extent possible. There would be no significant impact to transportation networks or traffic from construction-related activities.

Under the No Action alternative, construction activities would not take place and there would be no potential impacts to traffic or transportation networks.

#### **4.6.4 Utilities**

The Andrews Tower project activities would require additional short-term electric and communication services from available utility networks. The Proposed Action will utilize the existing electrical power lines located approximately 650 feet southwest of the site. Construction-related impacts are not expected to lead to major shortages in supply, nor are they expected to require major changes to the system. Impacts to utilities would not be significant.

During construction-related activities, precautions would be taken to avoid damage to existing utility lines. All potential modifications to utility services would be evaluated. Coordination with potentially affected local and regional utility service providers would occur to avoid unnecessary

damage or interruption of service. There would be no significant impact to utility services from construction-related activities with the Andrews Tower site.

Under the No Action alternative, construction activities would not take place and there would be no potential impacts to utilities.

#### 4.6.5 Public Health and Safety

Under the Proposed Action, there would be a slight increase in workplace safety hazards during the construction phase of the Andrews Tower site. Construction and ground-disturbing activities would take place for approximately one week and would include minor grading, tower base and footings installation, and tower erection. The construction site would be fenced and restricted to authorized personnel. Appropriate signs would be posted to further minimize safety risks. In addition, worker safety rules, based on Occupational Safety and Health Administration (OSHA) construction standards, will be established to protect workers. Therefore, construction-related impacts to human health and safety would not be significant. Following construction, there would be no readily identifiable public health and safety concerns associated with the tower.

Under the No Action alternative, construction activities would not take place and there would be no potential impacts to public health and safety.

#### 4.7 Summary Table

Affected Environment/ Resource Area	Impacts	Mitigation/BMPs
Geology and Soils	According to a review of the USDA Natural Resources Conservation Service Web Soil Survey, the soil types at the project site are not defined as prime or unique (Natural Resource Conservation Service 2011). No impacts to underlying geology are anticipated.	The proposed project site is not considered prime farmland. The proposed action will not significantly impact geology or soils at the site. The minor construction activity will incorporate practices to minimize soil erosion during the construction/erection of the communication tower, including best management practices such as minimization of area of disturbance, silt fencing and/or straw bales, and proper staging of equipment.
Air Quality	Air quality impacts during construction would originate from emission of construction vehicles, equipment, and fugitive dust stirred up during ground disturbing activities. Both would be short-term, temporary and of limited duration.	Construction contractors will use best management practices (BMP). These BMPs include spraying water to minimize dust, limiting the area of uncovered soil to the minimum needed for each activity, siting of staging areas to minimize fugitive dust, using a temporary gravel cover, limiting the number and speed of vehicles on the site, and covering trucks hauling dirt. BMPs for construction vehicle and equipment emissions include limiting vehicle idling time, and conducting proper vehicle maintenance.

	No impacts anticipated.	
Water Quality	No impacts to surface water and groundwater are anticipated.	According to the USGS McKenzie Lake SE, Texas 7.5 Minute Series Topographic Map dated 1970 (Figure 2), and the USEPA Region 6 Map of Sole Source Aquifers (USEPA Sole Source Aquifers 2011) (Figure 7), the Proposed Action is located in a grassland area of Andrews County, Texas. The site is approximately 3,000 feet above mean sea level with no indications of wetlands, floodplains, coastal management zones, and wild or scenic rivers noted in the reviewed databases and maps. Considering that there are no nearby water resources from the proposed site and the relatively limited size of the Andrews Tower footprint of less than 0.25 acres ground disturbance, construction activities are unlikely to result in a significant amount of erosion.
Wetlands	Wetlands are not located on or near the proposed site. No impacts to wetlands are anticipated	A review of the United States Department of the Interior, Fish and Wildlife Service (USFWS) National Wetlands Inventory map McKenzie Lake SE, Texas, 1995 (Figure 9), indicated that wetlands are not located on the site. Furthermore, at the time of the site reconnaissance, there was no evidence of potential wetlands, hydric soils or hydrophytic vegetation at the site. Furthermore, a review of the relevant soil survey map did not note hydric soils at the site (Natural Resource Conservation Service 2011). Based on the findings of this review, the proposed action will result in no effects to wetlands.
Floodplain	No impacts to the floodplain are anticipated.	According to the Flood Insurance Rate Map (FIRM) on-line database and information from American Flood Research, Inc. (AFR) (Appendix B), the site is in a portion of Andrews County which is not mapped by FEMA on a NFIP map (FIRM 2011). The proposed site is located on a parcel of grassland with sparse brush of the Southern High Plains at 3,000 feet of elevation. The nearest water body is a livestock tank located approximately 3,000 feet northwest of the site. Based on this information, the Proposed Action is not anticipated to affect areas of the 500-year floodplain, and there would be no impact to floodplains.

Coastal Resources	No impacts to coastal management zones are anticipated.	The Proposed Action is located in a grassland area of Andrews County, Texas approximately 295 miles northwest of the nearest coastal management zone. The site is approximately 3,000 feet above mean sea level with no indications of wetlands, floodplains, coastal management zones, and wild or scenic rivers noted in the reviewed databases and maps. The nearest water body is a livestock tank located approximately 3,000 feet northwest of the site identified in the USGS Topographic Map (Figure 2) and the 2008 aerial photograph (Figure 4). Based on the findings of this review, the proposed action will result in no effects to coastal management zones.
Threatened and Endangered Species and Critical Habitat	No impacts to federally protected species are anticipated.	No threatened, endangered, and sensitive species habitat was observed at the Proposed Action project site or on the surrounding area during the site reconnaissance. Database searches were researched for wildlife, wildlife habitat, and vegetation in the proposed Andrews Tower project construction site. Consultation with the US Fish and Wildlife Service was submitted on March 18, 2011. A stamped "no action" response from the US Fish and Wildlife Service was received on March 28, 2011. It is anticipated that the proposed tower and equipment compound will not have an effect to listed or proposed protected species or critical habitats. To minimize adverse affects on migratory birds, the tower will use white strobe lights during the daytime hours and red strobe lights during the evening hours.
Historic Properties	No impacts to historic properties are anticipated.	FEMA has determined that the proposed action will have no effect on historic resources. In the event that archeological deposits, including any Native American pottery, stone tools, bones, or human remains, are uncovered, the project shall be halted and the applicant shall stop all work immediately in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. All archeological findings will be secured and access to the sensitive area restricted. The applicant will inform FEMA immediately, FEMA will consult with the SHPO or THPO, and Tribes and work in sensitive areas cannot resume until consultation is completed and appropriate measures have been taken to ensure that the project is in compliance with the National Historic Preservation Act.
Tribal Coordination	No impacts to tribal lands are anticipated.	The following groups were contacted: Southern Ute Tribe, Ysleta del Sur Pueblo, Comanche Nation, Wichita and Affiliated Tribes, Tonkawa Tribe, and Mescalero Apache Tribe. All of the groups indicated by letter, email or by telephone contact that they had no interest in the site.
Noise	Temporary short-term construction-related noise generation would last only for the duration of construction activities, would be temporary and	It is anticipated that noise impacts from the Proposed Action construction activities would be temporary and would not exceed typical noise levels. Noise levels dBA at 50 feet from the source would be no greater than 85 dBA for no more than four to six continuous hours per day over a 10 to 35 day

	would not exceed noise levels greater than 85 dBA. No impacts anticipated.	period. Construction-related noise impacts from the Andrews Tower project would not be significant. To reduce noise levels during construction, construction activities would occur during normal working hours (i.e., 7:00 a.m. to 5:00 p.m.).
Traffic	Temporary short-term construction-related traffic would last only for the duration of construction activities and would be temporary. No impacts are anticipated.	Potential impacts to transportation and traffic are expected to be low, provided appropriate planning and implementation actions are taken. Existing roads would be used to the maximum extent possible. There would be no significant impact to transportation networks or traffic from construction-related activities.
Utilities	Construction-related impacts are not expected to lead to major shortages in supply, nor are they expected to require major changes to the system. No impacts are anticipated.	During construction-related activities, precautions would be taken to avoid damage to existing utility lines. All potential modifications to utility services would be evaluated. Coordination with potentially affected local and regional utility service providers would occur to avoid unnecessary damage or interruption of service. There would be no significant impact to utility services from construction-related activities with the Andrews Tower site.
Public Health and Safety	Construction activities during the construction phase of the proposed site could present safety risks to those performing the activities. No long-term negative safety impacts are anticipated.	Qualified construction personnel trained in the proper use of the appropriate equipment and safety precautions will be performing construction activities. Activities will be conducted in a safe manner and in accordance with standards specified in OSHA regulations.

## **5.0 CUMULATIVE IMPACTS**

Cumulative impacts represent the impact on either the natural or human environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or nonfederal) or persons undertake such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The Proposed Action would not have a significant impact on any resource area for those projects falling within the resource parameters described in the EA. The Proposed Action would have beneficial impact on human health and safety, because it would enable countywide improvements to public safety interoperable communications.

Under the No Action Alternative, no interoperable communications capability would occur. Existing interruption in public safety interoperable communications would persist, resulting in an adverse impact to human health and safety.

In accordance with 47 CFR Section 1.1307 (a) (1) through (8), an evaluation has been made to determine whether any of the listed FCC special interest items would be significantly affected if a tower structure and/or antenna and associated equipment control cabinets were constructed at the proposed site location. No FCC special interest items were identified.

The FCC NEPA Checklist is included (Appendix C). The checklist has been completed based on information contained in this report.

## **6.0 PUBLIC INVOLVEMENT**

A public notice was published in the "Andrews County News" on March 19, 2011 to allow for public comment (Appendix B). No comments pertaining to the public notice were received.

The availability of this EA will be advertised by public notice in the local weekly newspaper, the Midland Reporter Telegram. Copies of the EA will be available locally. The public comment period will extend for a period of fifteen (15) days. The EA can also be viewed and downloaded from FEMA's website at <http://www.fema.gov/plan/ehp/envdocuments/ea-region6.shtm>. If no substantive comments are received, the EA will become final and the initial public notice will also serve as the final public notice. The EA will then be archived on FEMA's website at <http://www.fema.gov/library/>.

## **7.0 REFERENCES**

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USEPA: Sole Source Aquifers, United States Environmental Protection Agency,

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### ***Government Contributors***

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## **FIGURES**

**Figure 1: Vicinity Map**

**Figure 2: 1970 Topographic Map**

**Figure 3: Site Plan**

**Figure 4: 2008 Aerial Photograph**

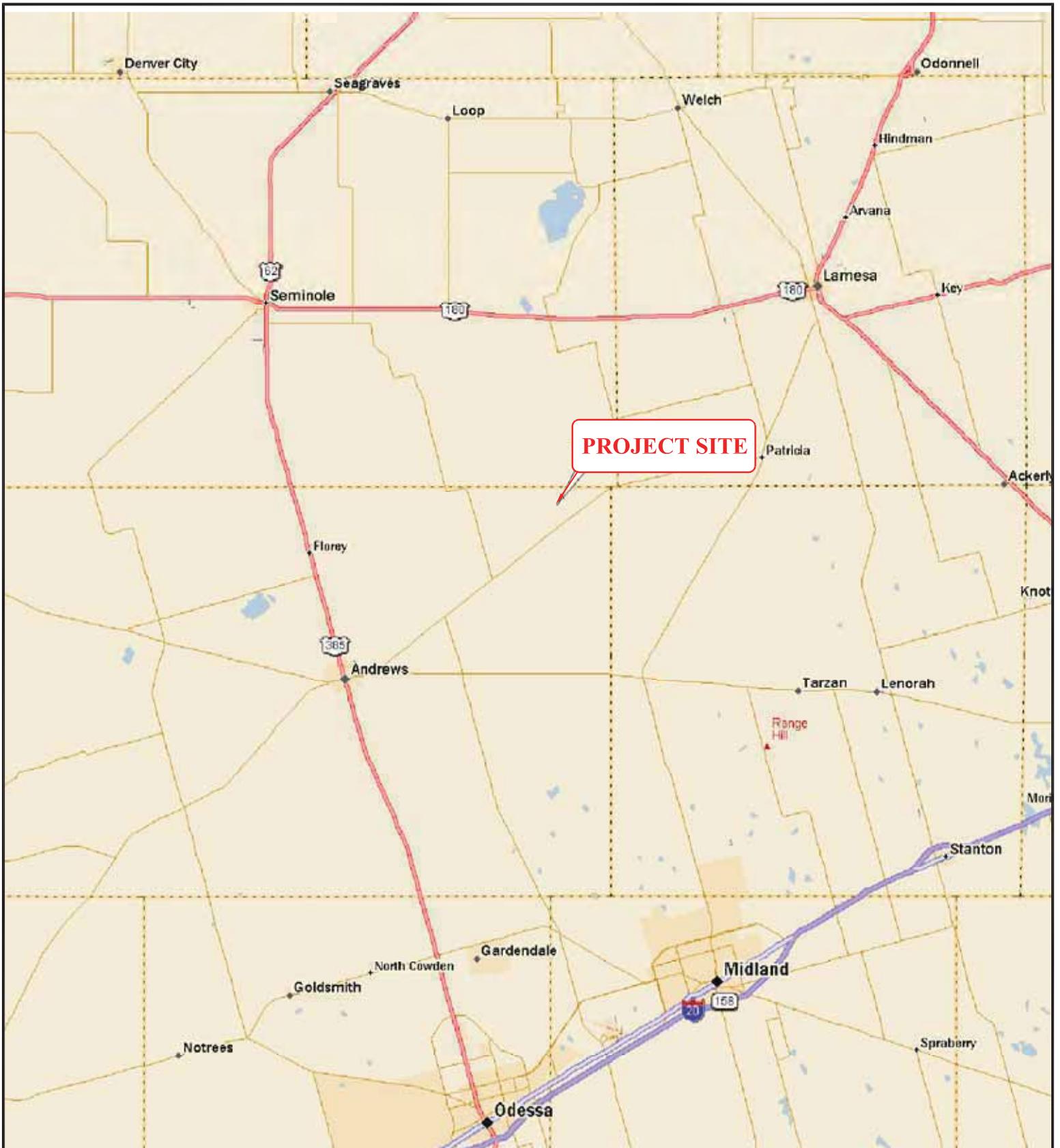
**Figure 5: Geologic Map**

**Figure 6: Soil Survey**

**Figure 7: Sole Source Aquifers EPA Region 6**

**Figure 8: Historic Sites Map**

**Figure 9: USFWS-National Wetlands Inventory Map**



**SOURCE:** DELORME STREET ATLAS USA 2009



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AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

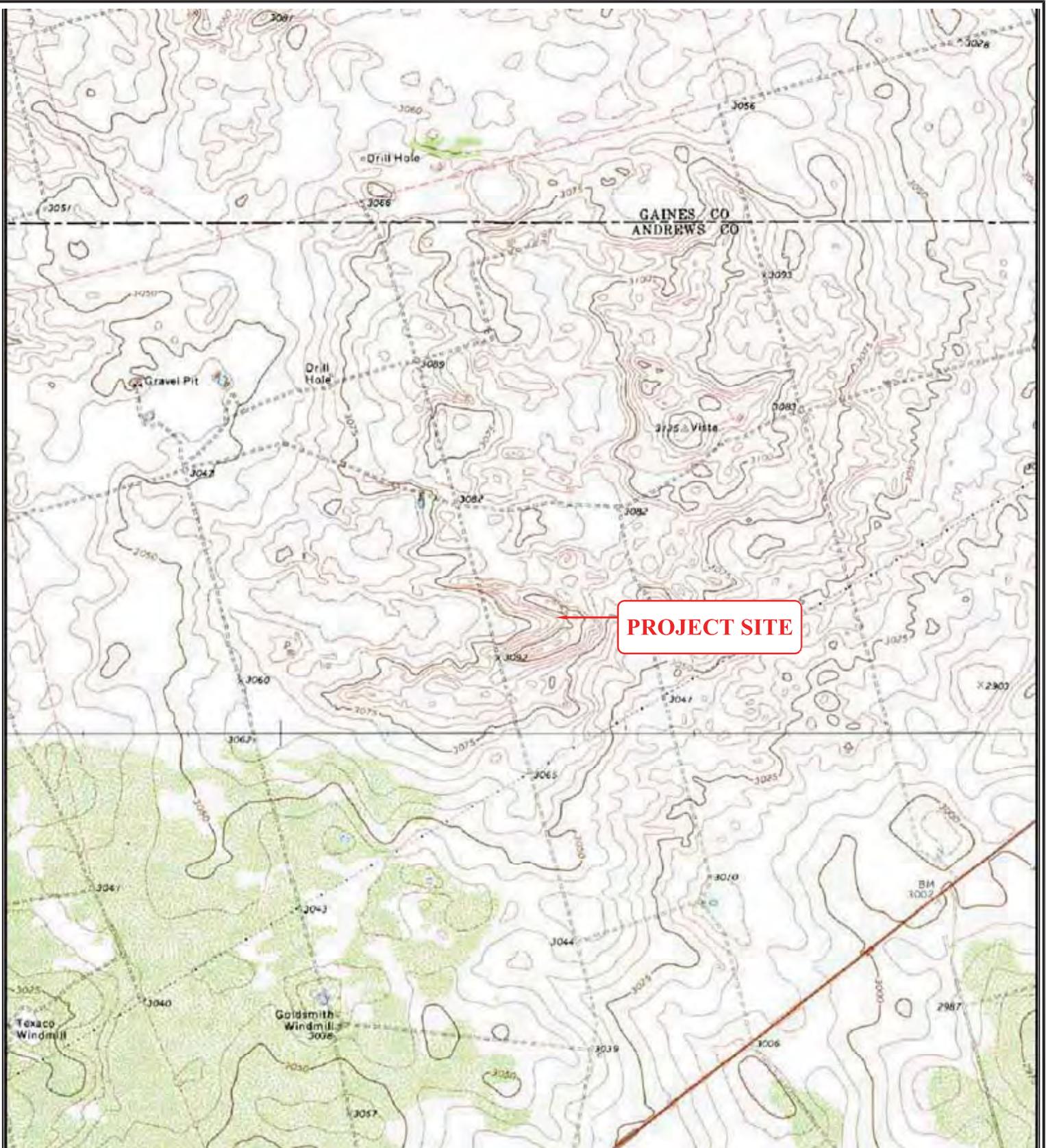
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Checked By:	JAA	File No.	90117039
Approved By:	JAA	Date:	3-18-11

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VICINITY MAP  
ANDREWS TOWER SITE  
9435 E STATE HWY 115  
(APPROXIMATELY 20 MILES NE OF ANDREWS, TX  
ON HWY 115)  
ANDREWS, ANDREWS COUNTY, TEXAS

FIG. No.
1



**SOURCE:** U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE MAP OF MCKENZIE LAKE SE, TEXAS.

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Project Mngr:	JAA
Drawn By:	LS(90)
Checked By:	JAA
Approved By:	JAA
Project No.	90117039
Scale:	1" = 2,000'
File No.	90117039
Date:	3-11-11

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1970 TOPOGRAPHIC MAP  
ANDREWS TOWER SITE  
9435 E STATE HWY 115  
(APPROXIMATELY 20 MILES NE OF ANDREWS, TX  
ON HWY 115)  
ANDREWS, ANDREWS COUNTY, TEXAS

Fig. No.

2

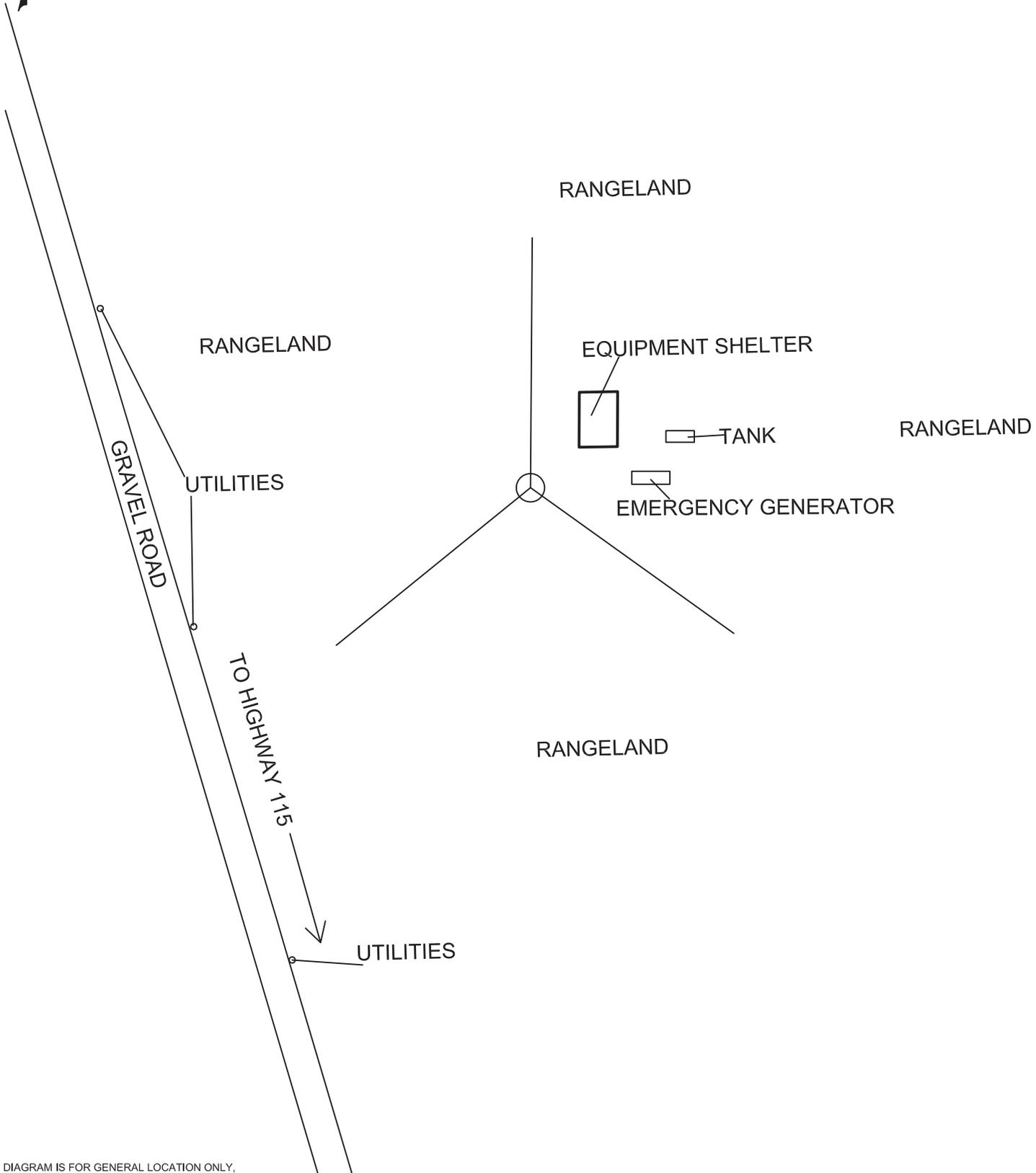


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AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Mngr: JAA	Project No. 90117039	 Consulting Engineers and Scientists 6911 BLANCO ROAD SAN ANTONIO, TX 78216 PH. (210) 641-2112 FAX. (210) 641-2124	SITE PLAN	FIG. No.
Drawn By: LS(90)	Scale: NOT TO SCALE		<b>ANDREWS TOWER SITE</b> 9435 E STATE HWY 115 (APPROXIMATELY 20 MILES NE OF ANDREWS, TX ON HWY 115) ANDREWS, ANDREWS COUNTY, TEXAS	<h1 style="font-size: 2em;">3</h1>
Checked By: JAA	File No. 90117039			
Approved By: JAA	Date: 3/28/11			



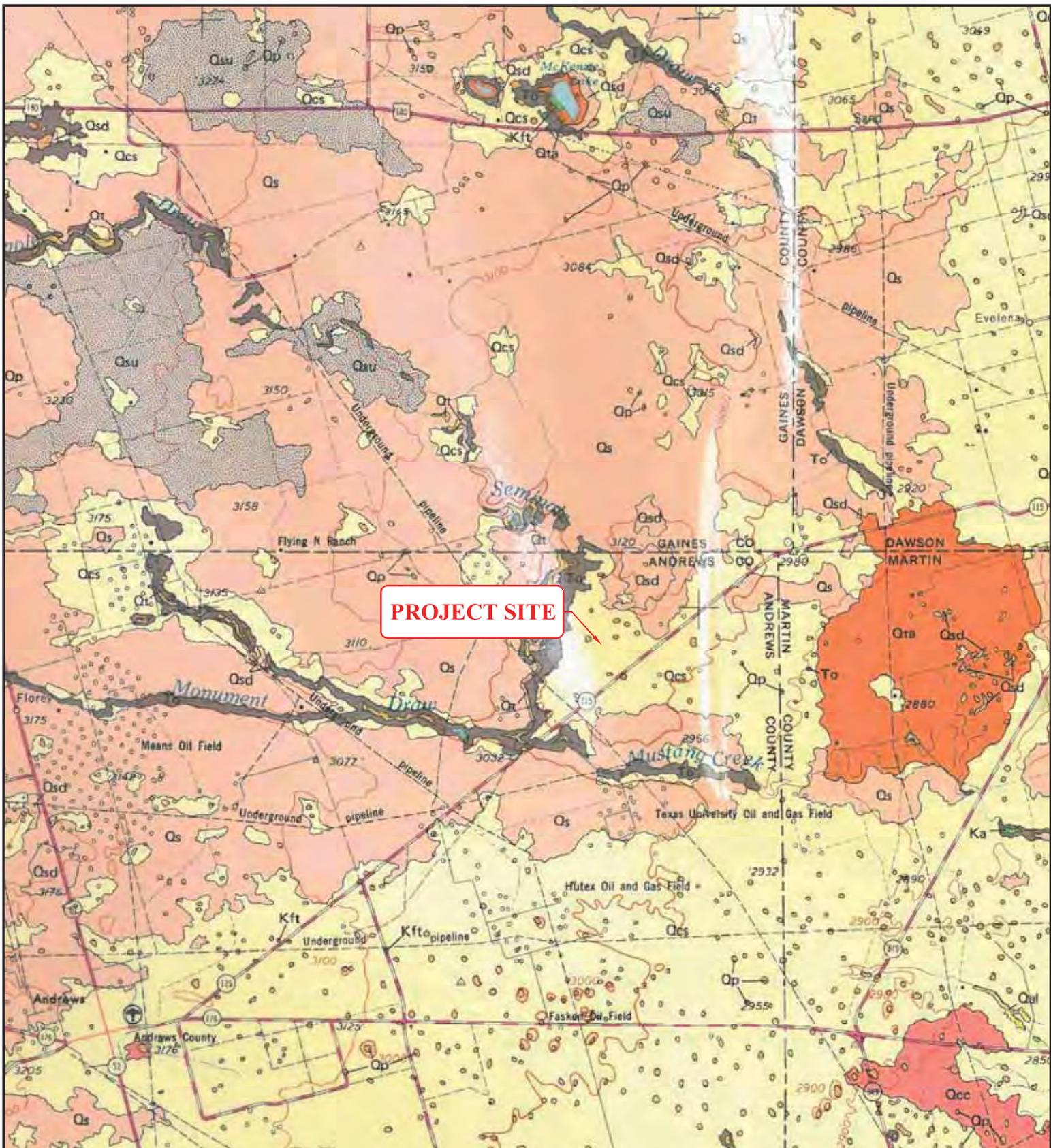
**PROJECT SITE**

**SOURCE:** DIGITAL GLOBE



DIAGRAM IS FOR GENERAL LOCATION ONLY,  
AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Mngr: JAA	Project No. 90117039	 Consulting Engineers and Scientists 6911 BLANCO ROAD SAN ANTONIO, TX 78216 PH. (210) 641-2112 FAX. (210) 641-2124	2008 AERIAL PHOTOGRAPH	Fig. No.
Drawn By: LS(90)	Scale: 1" = 500'		ANDREWS TOWER SITE	4
Checked By: JAA	File No. 90117039		9435 E STATE HWY 115	
Approved By: JAA	Date: 3-11-11		(APPROXIMATELY 20 MILES NE OF ANDREWS, TX ON HWY 115)	
			ANDREWS, ANDREWS COUNTY, TEXAS	



**PROJECT SITE**

**SOURCE:** THE UNIVERSITY OF TEXAS AT AUSTIN BUREAU OF ECONOMIC GEOLOGY, GEOLOGIC ATLAS OF TEXAS, HOBBS SHEET, 1976.

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

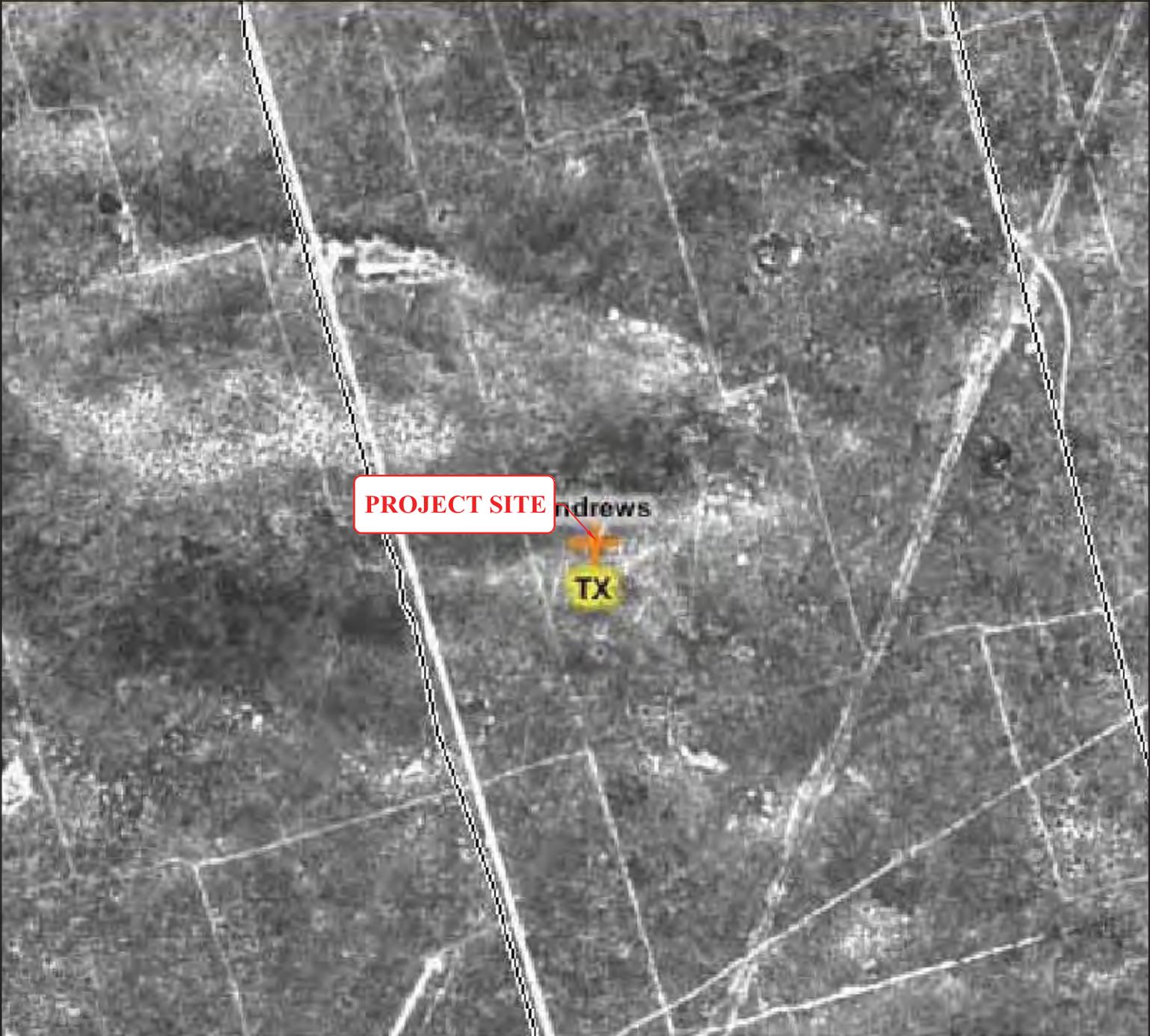
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Drawn By:	LS(90)	Scale:	NOT TO SCALE
Checked By:	JAA	File No.	90117039
Approved By:	JAA	Date:	3/28/11

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**GEOLOGIC MAP**  
**ANDREWS TOWER SITE**  
 9435 E STATE HWY 115  
 (APPROXIMATELY 20 MILES NE OF ANDREWS, TX  
 ON HWY 115)  
 ANDREWS, ANDREWS COUNTY, TEXAS

Fig. No.  
**5**



**SOURCE:** USDA NATURAL RESOURCE CONSERVATION SERVICE  
WEB SOIL SURVEY.

DIAGRAM IS FOR GENERAL LOCATION ONLY,  
AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES



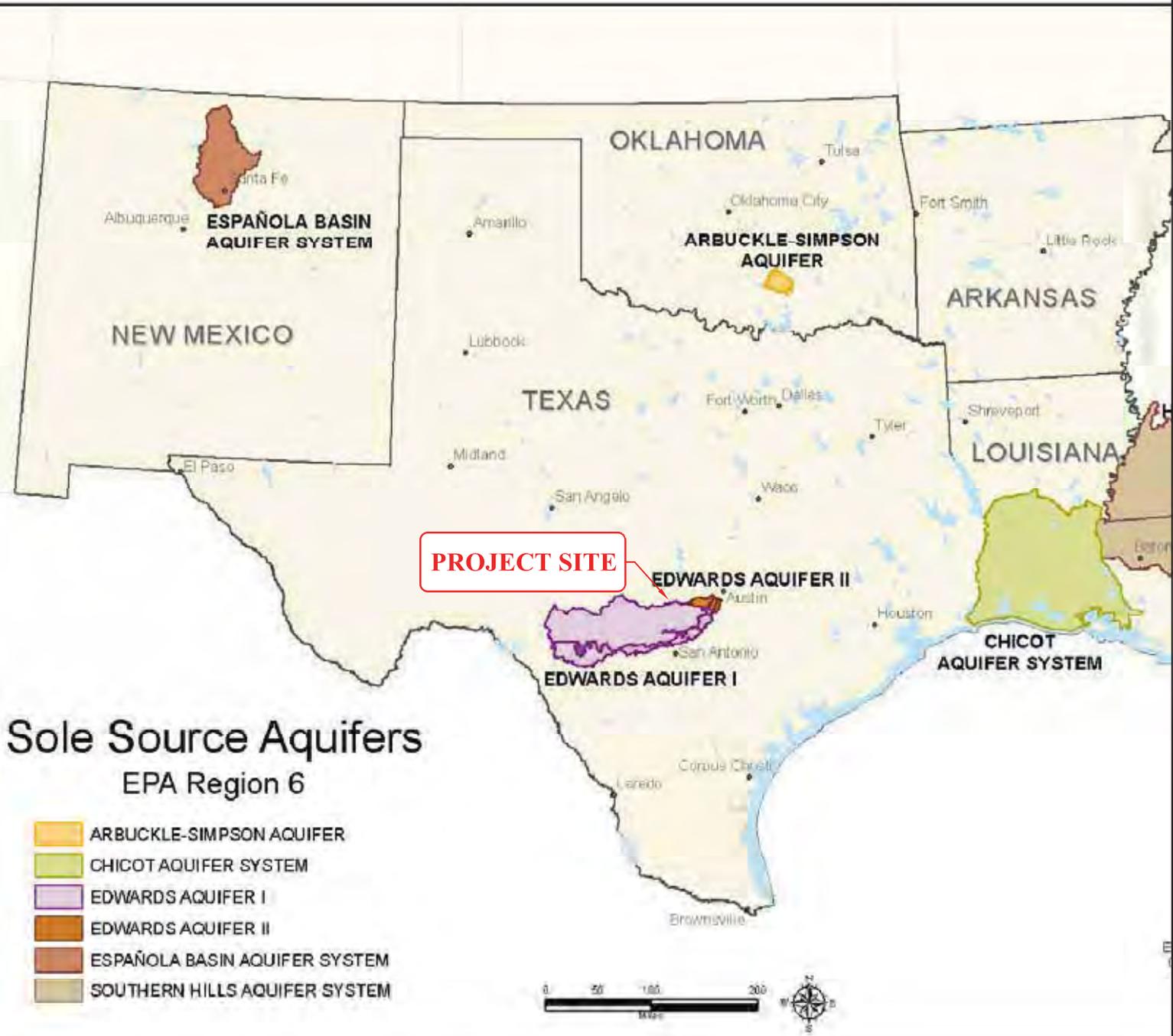
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Checked By:	JAA	File No.	90117039
Approved By:	JAA	Date:	3/28/11

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SOIL SURVEY  
ANDREWS TOWER SITE  
9435 E STATE HWY 115  
(APPROXIMATELY 20 MILES NE OF ANDREWS, TX  
ON HWY 115)  
ANDREWS, ANDREWS COUNTY, TEXAS

Fig. No.  
**6**



### Sole Source Aquifers EPA Region 6

- ARBUCKLE-SIMPSON AQUIFER
- CHICOT AQUIFER SYSTEM
- EDWARDS AQUIFER I
- EDWARDS AQUIFER II
- ESPAÑOLA BASIN AQUIFER SYSTEM
- SOUTHERN HILLS AQUIFER SYSTEM

**SOURCE:** U.S. ENVIRONMENTAL PROTECTION AGENCY.

DIAGRAM IS FOR GENERAL LOCATION ONLY,  
AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES



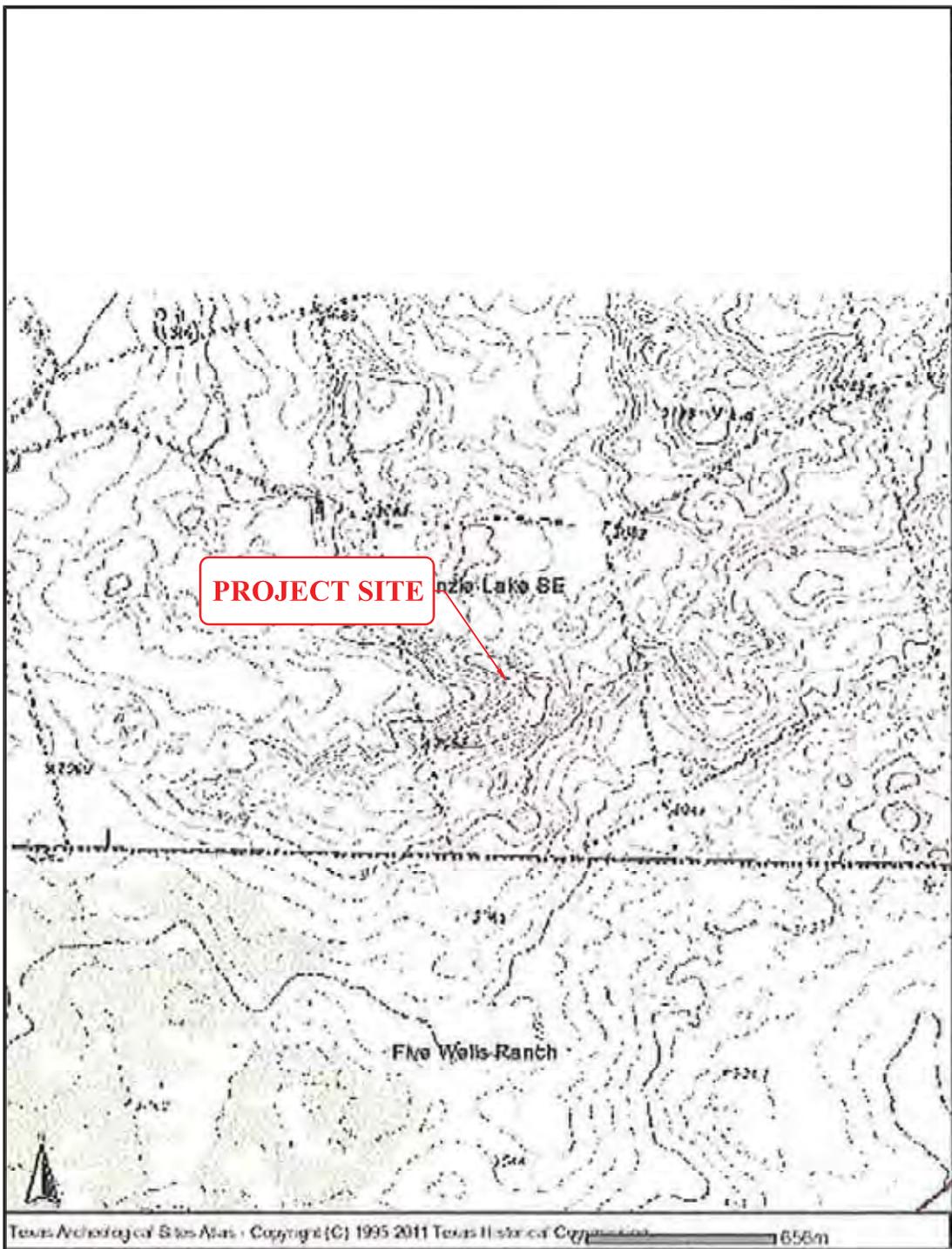
Project Mngr:	JAA	Project No.	90117039
Drawn By:	LS(90)	Scale:	NOT TO SCALE
Checked By:	JAA	File No.	90117039
Approved By:	JAA	Date:	3/28/11

**Terracon**  
Consulting Engineers and Scientists

6911 BLANCO ROAD      SAN ANTONIO, TX 78216  
PH. (210) 641-2112      FAX. (210) 641-2124

SOLE SOURCE AQUIFERS EPA REGION 6  
ANDREWS TOWER SITE  
9435 E STATE HWY 115  
(APPROXIMATELY 20 MILES NE OF ANDREWS, TX  
ON HWY 115)  
ANDREWS, ANDREWS COUNTY, TEXAS

Fig. No.  
  
**7**



- Legend**
- Archeological Site Centroids
  - Archeological Site Boundaries
  - Archeological Site Areas
  - Neighborhood Survey
  - Historical Marker
  - National Register Property
  - National Register District
  - National Register District (address restricted)
  - Archeological Project [linear]
  - Archeological Project [area]
  - Cemetery
  - Shipwreck
  - USGS Quad Grid
  - Counties
  - USGS Topo Data

Texas Archeological Sites Atlas - Copyright (C) 1995-2011 Texas Historical Commission 0 656m

**SOURCE:** TEXAS HISTORICAL COMMISSION HISTORIC SITES ATLAS.

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES



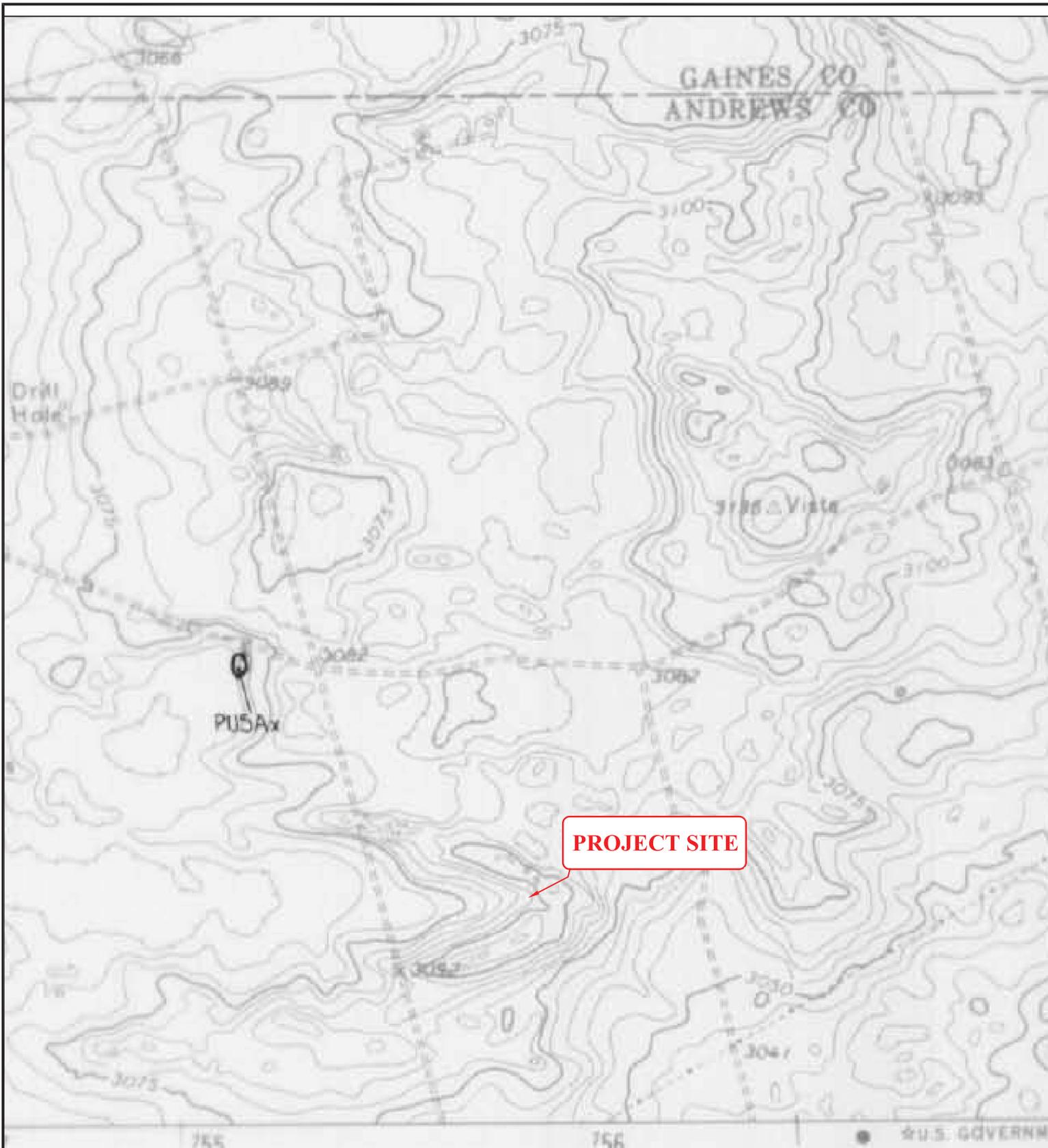
Project Mng'r: JAA	Project No. 90117039
Drawn By: LS(90)	Scale: NOT TO SCALE
Checked By: JAA	File No. 90117039
Approved By: JAA	Date: 3/28/11

**Terracon**  
Consulting Engineers and Scientists

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PH. (210) 641-2112 FAX. (210) 641-2124

HISTORIC SITES MAP  
ANDREWS TOWER SITE  
9435 E STATE HWY 115  
(APPROXIMATELY 20 MILES NE OF ANDREWS, TX  
ON HWY 115)  
ANDREWS, ANDREWS COUNTY, TEXAS

Fig. No.  
**8**



**SOURCE:** U.S. FISH AND WILDLIFE NATIONAL WETLANDS INVENTORY MAP.

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES



Project Mngr: JAA	Project No. 90117039
Drawn By: LS(90)	Scale: NOT TO SCALE
Checked By: JAA	File No. 90117039
Approved By: JAA	Date: 3/28/11

**Terracon**  
Consulting Engineers and Scientists

6911 BLANCO ROAD SAN ANTONIO, TX 78216  
PH. (210) 641-2112 FAX. (210) 641-2124

USFWS-NATIONAL WETLANDS INVENTORY MAP  
**ANDREWS TOWER SITE**  
9435 E STATE HWY 115  
(APPROXIMATELY 20 MILES NE OF ANDREWS, TX  
ON HWY 115)  
ANDREWS, ANDREWS COUNTY, TEXAS

Fig. No.  
**9**

**APPENDIX A**  
**Site Photographs**



**Photo #1** View of the site facing east.



**Photo #2** View of the site facing south.



**Photo #3** 91 View of the site facing west.



**Photo #4** View of the site facing northwest.



**Photo #5** View from the center of the site facing north.



**Photo #6** View from the center of the site facing east.



**Photo #7** View from the center of the site facing southwest.

**APPENDIX B**  
**Agency Correspondence**

Response Dated March 28, 2011 from USFWS

GeoSearch - Special Status Species Report Dated February 28, 2011

Texas Parks and Wildlife – Notes for County Lists of Texas’s Special Species Dated February 14, 2006

Texas Parks and Wildlife – The Natural Diversity Database

Texas Parks and Wildlife – Annotated County List of Rare Species Dated December 20, 2010

Response Dated March 29, 2011 from Texas SHPO

Publisher’s Affidavit Dated March 20, 2011 from Andrews County News

Letter Dated April 11, 2011 from Comanche Nation Historic Preservation Office

E-mail Dated April 13, 2011 from Mescalero Apache Tribe

E-mail Dated February 25, 2011 from Tonkawa Tribe

Email Dated February 23, 2011 from Ysleta del Sur Pueblo



Based on review of the US Geological Survey (USGS) McKenzie Lake SE, Texas 7.5 minute, topographic map, the site elevation is approximately 3,000 feet above mean sea level, and gently slopes towards the north. No wetlands, streams, springs, ponds, or other water sources are located on the tower site. No major water sources are located within 1.5 miles of the site.

According to the review of the FEMA National Flood Insurance Program Map Service Center the area of the site is located in an unincorporated area of Andrews County and is unmapped. Terracon reviewed the US Fish and Wildlife Service's (USFWS) National Wetlands Inventory on-line. The review indicated that wetlands are not located on the site. During Terracon's site reconnaissance, there was no evidence of potential wetlands, hydric soils or hydrophytic vegetation at the site or in the immediate surrounding area. Furthermore, a review of the relevant soil survey map from the United States Department of Agriculture Natural Resources Conservation Service web site did not note hydric soils at the site.

### **Threatened and Endangered Species**

Field reconnaissance, a GeoSearch Special Status Species Report, as well as literature and agency file searches from the U.S. Fish and Wildlife Service (USFWS) Division of Endangered Species website and the Texas Parks and Wildlife Department (TPWD) website were reviewed to identify the potential occurrence of any federally listed T/E species in the vicinity of the site. The species listed for Andrews County are the Bald Eagle (*Haliaeetus leucocephalus*) identified as delisted taxon, being monitored, lesser prairie-chicken (*Tympanuchus pallidicinctus*) listed as candidate taxon, and the sand dune Lizard (*Sceloporus arenicolus*) listed as candidate taxon. The proposed tower site did not contain habitat for the Bald Eagle (*Haliaeetus leucocephalus*), lesser prairie-chicken (*Tympanuchus pallidicinctus*) and the sand dune Lizard (*Sceloporus arenicolus*).

The TPWD maintains a directory of State and Federally listed threatened and endangered (T&E) species by county; 20 additional State listed T&E species were identified as having some probability of occurrence in Andrews County. Most of these species were excluded from detailed analysis because their preferred habitats (i.e., coastal environments, large forests, freshwater habitats, etc.) were not present within the proposed project site or subject area. The full list of species and preferred habitat is provided in the attachments.

According to the GeoSearch Special Status Species Report information obtained through the TPWD, no species were listed in the locatable database to be within the 1.25 mile APE of the proposed site.

Preferred habitats for these species were compared to the proposed site, and none of the preferred habitats were identified. It is anticipated that the proposed tower and equipment compound will not have an effect to listed or proposed protected species or critical habitats.

Andrews County is located within a portion of the Central Flyway for migratory birds. Fall and spring migrants use the region for temporary stops during travel between the northern and

southern hemispheres. Best management practices should be implemented for avoiding harassment and harm to migratory birds during construction activities. Impacts on migratory birds could be expected as a result of collision with operating towers, antennae, and other tall structures, particularly during periods of low visibility and as a result of tower lighting that might be distracting to some species. The probability of collision is difficult to determine programmatically due to the range of variables that affect the potential for collision and the lack of conclusive data on the causes of collision

### **Recommendations**

Based on the reviewed literature, agency files, and observations made during the field investigation, it is Terracon's opinion that T&E species or preferred habitat, are not present on-site. Regarding migratory birds, Terracon recommends that Permian Basin Regional Planning Commission, use tower light systems with minimum intensity, maximum off-phased white strobe lighting according to FAA regulations, as well as placing visual markers on guyed wires.

Please contact us if you have any questions or wish to discuss the proposed project further, please do not hesitate to call me at (210) 641-2112.

Sincerely,

**Terracon**

Julio A. Aguilar  
Environmental Scientist

Attachments USGS Topographic Map  
Location Map  
Aerial Photograph  
Wetlands Map  
Threatened and Endangered Species Database Information  
Site Photographs



On time. On target. In touch.™

---

## ***Special Status Species Report***

---

<http://www.geo-search.net/QuickMap/index.htm?DataID=Standard0000026599>

*Click on link above to access the map and satellite view of current property*

*Target Property:*

**Andrews, Texas Tower Site**

**9435 E St Hwy 115**

**Andrews, Andrews County, Texas 79714**

*Prepared For:*

**Terracon Consultants-San Antonio**

**Order #: 11475**

**Job #: 26599**

**Project #: 90117039**

**Date: 02/28/2011**

## TARGET PROPERTY SUMMARY

**Andrews, Texas Tower Site**

**9435 E St Hwy 115**

**Andrews, Andrews County, Texas 79714**

**USGS Quadrangle: Mc Kenzie Lake Se, TX**

**Target Property Geometry: Point**

**Target Property Longitude(s)/Latitude(s):**

**(-102.278244, 32.503773)**

**County/Parish Covered:**

**Andrews (TX), Gaines (TX)**

**Zipcode(s) Covered:**

**Andrews TX: 79714**

**Seminole TX: 79360**

**State(s) Covered:**

**TX**

**\*Target property is located in Radon Zone 3.**

**Zone 3 areas have a predicted average indoor radon screening level less than 2 pCi/L.**

Disclaimer - The information provided in this report was obtained from a variety of public sources. GeoSearch cannot ensure and makes no warranty or representation as to the accuracy, reliability, quality, errors occurring from data conversion or the customer's interpretation of this report. This report was made by GeoSearch for exclusive use by its clients only. Therefore, this report may not contain sufficient information for other purposes or parties. GeoSearch and its partners, employees, officers And independent contractors cannot be held liable For actual, incidental, consequential, special or exemplary damages suffered by a customer resulting directly or indirectly from any information provided by GeoSearch.



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## DATABASE FINDINGS SUMMARY

DATABASE	ACRONYM	LOCA- TABLE	UNLOCA- TABLE	SEARCH RADIUS (miles)
<b>STATE (TX)</b>				
MANAGED AREAS	TXMNGDAREAS	0	0	1.5000
SPECIAL STATUS SPECIES	TXNDD	0	0	1.5000
<b>SUB-TOTAL</b>		<b>0</b>	<b>0</b>	

---

TOTAL

0 0



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## LOCATABLE DATABASE FINDINGS

ACRONYM	Target Property	SEARCH						Total
		RADIUS (miles)	1/8 Mile (> TP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	
<b>STATE (TX)</b>								
TXMNGDAREAS		1.500	0	0	0	0	NS	0
TXNDD		1.500	0	0	0	0	NS	0
<b>SUB-TOTAL</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

TOTAL

0      0      0      0      0      0

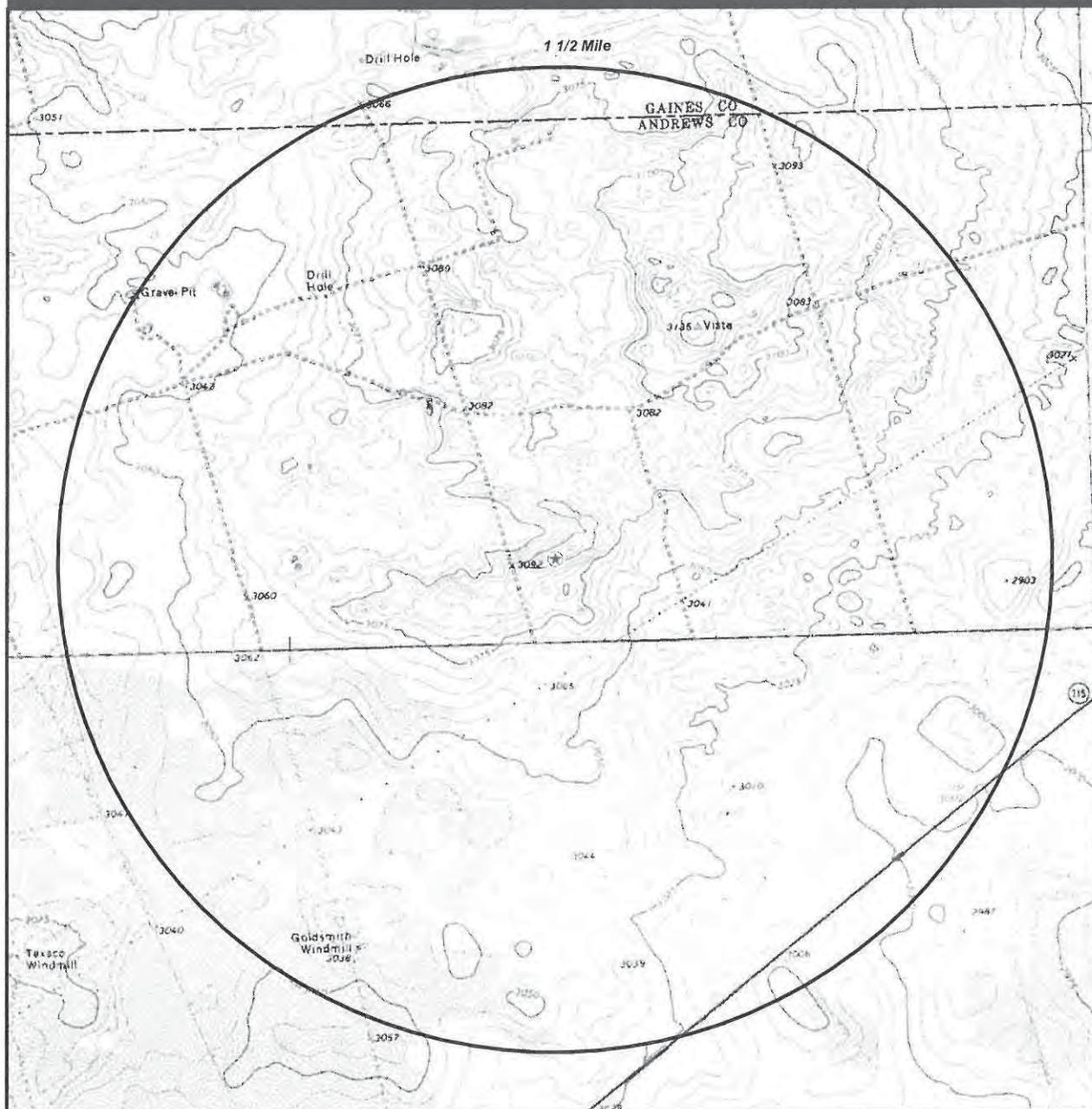
**NOTES:**

NS = NO SEARCH REQUESTED BY CUSTOMER



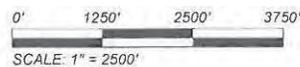
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# SPECIAL STATUS SPECIES SITE MAP



☉ Target Property (TP)

**Quadrangle(s): Mc Kenzie Lake  
Se  
Andrews, Texas Tower Site  
9435 E St Hwy 115  
Andrews, Texas  
79714**



**GeoSearch**

2705 Bee Caves Rd, Suite 330 - Austin, Texas 78746 - phone: 866-396-0042 - fax: 512-472-9967



Notes for  
County Lists of Texas' Special Species



The Texas Parks and Wildlife (TPWD) county lists **include**:

**Vertebrates, Invertebrates, and Vascular Plants** on the special species lists of the TPWD, Non-game and Rare Species Program, Natural Diversity Database (NDD) (formerly the Biological and Conservation Data System). These special species lists are comprised of all species, subspecies, and varieties that are federally listed; proposed to be federally listed; have federal candidate status; are state listed; or carry a global conservation status indicating a species is imperiled, very rare, vulnerable to extirpation; and some species ranked rare or uncommon.

**Colonial Waterbird Nesting Areas and Migratory Songbird Fallout Areas** are included on the county lists for coastal counties only.

The TPWD county lists **exclude**:

**Natural Plant Communities** such as Little Bluestem-Indiangrass Series (native prairie remnant), Water Oak-Willow Oak Series (bottomland hardwood community), Saltgrass-Cordgrass Series (salt or brackish marsh), Sphagnum-Beakrush Series (seepage bog).

**Other Significant Features** such as non-coastal bird rookeries, comprehensive migratory bird information, bat roosts, bat caves, invertebrate caves, and prairie dog towns.

**These lists are not all inclusive for all rare species distributions.** The lists were developed and are updated based on field guides, staff expertise, scientific publications, and the TPWD Natural Diversity Database (NDD) (formerly the Biological and Conservation Data System) occurrences data. Historic ranges for some state extirpated species, full historic distributions for some extant species, accidentals and irregularly appearing species, and portions of migratory routes for particular species are not included. Species that appear on county lists do not all share the same probability of occurrence within a county. Some species are migrants or wintering residents only. Additionally, a few species may be historic or considered extirpated within a county.

TPWD includes the Federal listing status for your convenience and makes every attempt to keep the information current and correct. However, the US Fish and Wildlife Service (FWS) is the responsible authority for Federal listing status. The TPWD lists do not substitute for contact with the FWS and federally listed species county ranges may vary from the FWS county level species lists because of the inexact nature of range map development and use.

This information is for your assistance only; due to continuing data updates, **please do not reprint or redistribute the information, instead refer all requesters to our office to obtain the most current information available.**



## The Natural Diversity Database



The Texas Parks and Wildlife Department (TPWD), Natural Diversity Database (NDD) (formerly the Biological and Conservation Data System), established in 1983, is the Department's most comprehensive source of information on rare, threatened, and endangered plants and animals, exemplary natural communities, and other significant features. Though it is not all-inclusive, the NDD is constantly updated, providing current or additional information on statewide status and locations of these unique elements of natural diversity.

The NDD gathers biological information from museum and herbarium collection records, peer reviewed publications, experts in the scientific community, organizations, qualified individuals, and on-site field surveys conducted by TPWD staff on public lands or private lands with written permission. TPWD staff botanists, zoologists, and ecologists perform field surveys to locate and verify specific occurrences of high-priority biological elements and collect accurate information on their condition, quality, and management needs.

The NDD can be used to help evaluate the environmental impacts of routing and siting options for development projects. It also assists in impact assessment, environmental review, and permit review.

**Given the small proportion of public versus private land in Texas, the NDD does not include a representative inventory of rare resources in the state. Although it is based on the best data publicly available to TPWD regarding rare species, these data cannot provide a definitive statement as to the presence, absence, or condition of special species, natural communities, or other significant features in any area. Nor can these data substitute for on-site evaluation by qualified biologists. The NDD information is intended to assist the user in avoiding harm to species that may occur.**

Please use the following citation to credit the source for this county level information:

Texas Parks and Wildlife Department, Wildlife Division, Diversity and Habitat Assessment programs. County Lists of Texas' Special Species. [county name(s) and revised date(s)].

*For information on obtaining a project review form or a site-specific review of a project area for rare species, and for updated county lists, please call (512) 912-7011.*

## ANDREWS COUNTY

### BIRDS

Federal Status      State Status

**American Peregrine Falcon**      *Falco peregrinus anatum*

DL      T

year-round resident and local breeder in west Texas, nests in tall cliff eyries; also, migrant across state from more northern breeding areas in US and Canada, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

**Arctic Peregrine Falcon**      *Falco peregrinus tundrius*

DL

migrant throughout state from subspecies' far northern breeding range, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

**Baird's Sparrow**      *Ammodramus bairdii*

shortgrass prairie with scattered low bushes and matted vegetation; mostly migratory in western half of State, though winters in Mexico and just across Rio Grande into Texas from Brewster through Hudspeth counties

**Bald Eagle**      *Haliaeetus leucocephalus*

DL      T

found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds

**Ferruginous Hawk**      *Buteo regalis*

open country, primarily prairies, plains, and badlands; nests in tall trees along streams or on steep slopes, cliff ledges, river-cut banks, hillsides, power line towers; year-round resident in northwestern high plains, wintering elsewhere throughout western 2/3 of Texas

**Lesser Prairie-Chicken**      *Tympanuchus pallidicinctus*

C

arid grasslands, generally interspersed with shrubs such as sand sagebrush, sand plum, skunkbush sumac, and shinnery oak shrubs, but dominated by sand dropseed, sideoats grama, sand bluestem, and little bluestem grasses; nests in a scrape lined with grasses

**Mountain Plover**      *Charadrius montanus*

PT

breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous

**Peregrine Falcon**      *Falco peregrinus*

DL      T

both subspecies migrate across the state from more northern breeding areas in US and Canada to winter along coast and farther south; subspecies (F. p. anatum) is also a resident breeder in west Texas; the two subspecies' listing statuses differ, F.p. tundrius is no longer listed in Texas; but because the subspecies are not easily distinguishable at a distance, reference is generally made only to the species level; see subspecies for habitat.

**Prairie Falcon**      *Falco mexicanus*

open, mountainous areas, plains and prairie; nests on cliffs

## ANDREWS COUNTY

### BIRDS

		Federal Status	State Status
<b>Snowy Plover</b>	<i>Charadrius alexandrinus</i>		
formerly an uncommon breeder in the Panhandle; potential migrant; winter along coast			
<b>Western Burrowing Owl</b>	<i>Athene cunicularia hypugaea</i>		
open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows			
<b>Western Snowy Plover</b>	<i>Charadrius alexandrinus nivosus</i>		
uncommon breeder in the Panhandle; potential migrant; winter along coast			
<b>Whooping Crane</b>	<i>Grus americana</i>	LE	E
potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties			

### MAMMALS

		Federal Status	State Status
<b>Black-footed ferret</b>	<i>Mustela nigripes</i>	LE	
extirpated; inhabited prairie dog towns in the general area			
<b>Black-tailed prairie dog</b>	<i>Cynomys ludovicianus</i>		
dry, flat, short grasslands with low, relatively sparse vegetation, including areas overgrazed by cattle; live in large family groups			
<b>Gray wolf</b>	<i>Canis lupus</i>	LE	E
extirpated; formerly known throughout the western two-thirds of the state in forests, brushlands, or grasslands			
<b>Jones' pocket gopher</b>	<i>Geomys knoxjonesi</i>		
southwestern plains of Texas; deep sandy soils of aeolian origin; small isolated population vulnerable to land use changes			
<b>Pale Townsend's big-eared bat</b>	<i>Corynorhinus townsendii pallescens</i>		
roosts in caves, abandoned mine tunnels, and occasionally old buildings; hibernates in groups during winter; in summer months, males and females separate into solitary roosts and maternity colonies, respectively; single offspring born May-June; opportunistic insectivore			
<b>Swift fox</b>	<i>Vulpes velox</i>		
restricted to current and historic shortgrass prairie; western and northern portions of Panhandle			

### REPTILES

		Federal Status	State Status
<b>Dune sagebrush lizard</b>	<i>Sceloporus arenicolus</i>	PE	
confined to active sand dunes near Monahans; dwarf shin-oak sandhills with sagebrush and yucca; opportunistic insectivore; 'sit and wait' predator; burrows in sand or plant litter to escape enemies			
<b>Texas horned lizard</b>	<i>Phrynosoma cornutum</i>		T

## ANDREWS COUNTY

### REPTILES

Federal Status      State Status

open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September

### PLANTS

Federal Status      State Status

#### **Dune umbrella-sedge**

*Cyperus onerosus*

moist to wet sand in swales and other depressions among active or partially stabilized sand dunes; flowering/fruiting late summer-fall

## ENVIRONMENTAL RECORDS DEFINITIONS - STATE (TX)

### **TXMNGDAREAS** Managed Areas

VERSION DATE: NR

Areas identified for conservation, such as State or Federal lands, nature preserves and parks. These areas have been shown to contain evidence of element occurrences found in the Natural Diversity Database.

### **TXNDD** Special Status Species

VERSION DATE: NR

The Texas Natural Diversity Database (TXNDD) was established in 1983 and is the Texas Parks and Wildlife Department's (TPWD) most comprehensive source of information on rare, threatened, and endangered plants, animals, invertebrates, exemplary natural communities, and other significant features. The TXNDD is continually updated, providing current or additional information on statewide status and locations of these unique elements of natural diversity. The TXNDD does not include a representative inventory of rare resources in the state due to the small proportion of public versus private land. Although it is based on the best data available to TPWD regarding rare species, these data cannot provide a definitive statement as to the presence, absence, or condition of special species, natural communities, or other significant features in any area. Nor can these data substitute for on-site evaluation by qualified biologists.



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MAR 22 2011

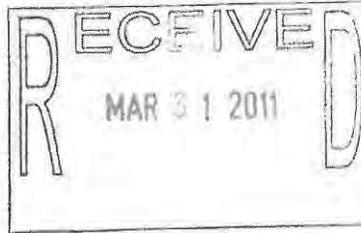
History Programs Division

Terracon

Consulting Engineers & Scientists

March 17, 2011

Texas Historical Commission  
105 West 16<sup>th</sup> Street  
Austin, Texas 78701



Terracon Consultants, Inc.  
6911 Blanco Road  
San Antonio, Texas 78216-6164  
Phone 210.641.2112  
Fax 210.558.7894  
www.terracon.com

Attn: Mark Wolfe

Cultural Resources Review/Section 106 Review  
Proposed Telecommunications Tower  
Applicant Name: Permian Basin Regional Planning Commission  
Site Name: Andrews, TX Tower Site  
9435 E State Highway 115  
(Approximately 20 miles NE of Andrews, TX on Highway 115)  
Andrews, Andrews County, Texas  
Terracon Project No. 90117039

NO HISTORIC  
PROPERTIES AFFECTED  
PROJECT MAY PROCEED  
by [Signature]  
for Mark Wolfe  
State Historic Preservation Officer  
Date 29 March 2011

Dear Mr. Wolfe:

On behalf of Permian Basin Regional Planning Commission, Terracon Consultants, Inc. (Terracon) is requesting a review of potential impacts to historic properties that may result from the proposed construction of a 480-foot guyed telecommunications tower at the above referenced location. Federal Communications Commission's (FCC) regulations require that Permian Basin Regional Planning Commission consider the effects of the proposed tower on historic properties. Your response is sought in compliance with Section 106 of the National Historic Preservation Act (NHPA). Enclosed is the NT Submission Packet – FCC Form 620 and appropriate attachments.

Terracon is submitting this letter, on behalf of Permian Basin Regional Planning Commission, to seek a letter of no effect and to comply with Federal Communications Commission (FCC) requirements as identified in 47CFR Ch. 1 §1.1307. Your comments are also being requested pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's regulation for compliance with Section 106, codified at 36 CFR Part 800. Your confirmation on this matter would be greatly appreciated.

Please feel free to contact our office if you have any questions concerning this letter.

Sincerely,

Terracon

[Signature]  
Julio A. Aguilar  
Environmental Scientist

[Signature]  
S. Lorraine Norwood, M.A., R.P.A.  
Principal Investigator



## Publisher's Affidavit

STATE OF TEXAS  
COUNTY OF ANDREWS

Before me, the undersigned authority, on this day personally appeared Don Ingram, Publisher of the Andrews County News, a newspaper having general circulation in Andrews County, Texas, who being by me duly sworn, deposes and says that the foregoing attached notice was published in said newspaper on the following date(s), to wit:

March 20, 2011

Don Ingram  
Don Ingram, Publisher

Subscribed and sworn to before me this 30<sup>th</sup> day of March 2011 to certify which witness my hand and seal of office.

P. A. Rider  
Notary Public in and for Andrews County, Texas



Priscilla Ann Rider  
Notary Public in and for Andrews County, Texas  
7-30-14

My Commission Expires

This is to serve as notice that Permian Basin Regional Planning Commission is in the process of fulfilling compliance requirements for a 480-foot guyed telecommunications tower to be located at approximately 9435 E. State Hwy. 115 in Andrews, TX (22-30-13.6 N latitude and 102-16-41.7 W longitude, referred to as tower number 901170391). Comments are sought on the effect of the proposed tower on historic properties within the view shed of the proposed tower per the Nationwide Programmatic Agreement of March 7, 2005 under the National Historic Preservation Act of 1966. For comments, fax to: Julio A. Aguilar (210) 641-2124 (please refer to tower number).

# Comanche Nation Historic Preservation Office



April 11, 2011

Julio A. Aguilar, Environmental Scientist  
Terracon Consultants, Inc.  
6911 Blanco Road  
San Antonio, TX 78216-6164

RE: **TCNS # 73983 Site Name: Andrews, TX Tower Site**

Dear Mr. Aguilar:

In response to your request, the above referenced project has been reviewed by staff of this office to identify areas that may potentially contain prehistoric or historic archeological materials. The location of your project has been cross referenced with the Comanche Nation site files, where an indication of *no current listing* has been identified. Therefore, based on the topographic/hydrologic settings of your and level of work proposed, archeological materials *are* not likely to be encountered.

If you require additional information or are in need of further assistance, please contact this office at (580) 595-9960 or 9618.

This review is performed in order to locate, record, and preserve the Comanche Nation and State's prehistoric and historic cultural heritage, in cooperation with the State Historic Preservation Office.

Sincerely,

Kelly Glancy, Comanche Nation HPO

Reply to Proposed Tower Structure (Notification ID 73983) - Email ID #2780134.txt  
From: towernotifyinfo@fcc.gov  
Sent: Wednesday, April 13, 2011 5:08 PM  
To: Aguilar, Julio A  
Cc: tcns.fccarchive@fcc.gov; holly@mathpo.org  
Subject: Reply to Proposed Tower Structure (Notification ID: 73983) - Email ID #2780134

Dear Terracon Consultants Inc,

Thank you for using the Federal Communications Commission's (FCC) Tower Construction Notification System (TCNS). The purpose of this email is to inform you that an authorized user of the TCNS has replied to a proposed tower construction notification that you had submitted through the TCNS.

The following message has been sent to you from Tribal Historic Preservation Officer Holly B Houghten of the Mescalero Apache Tribe in reference to Notification ID #73983:

After review of this communications project, it has been determined that the Mescalero Apache Tribe has no immediate concerns within the project area, and that the project will cause no adverse effects to cultural resources or areas of interest to the Mescalero Apache Tribe. If, however, the Applicant discovers archeological remains or resources during construction, the Applicant should stop construction and notify the appropriate Federal Agency and Tribe(s).

For your convenience, the information you submitted for this notification is detailed below.

Notification Received: 02/21/2011  
Notification ID: 73983  
Tower Owner Individual or Entity Name: Permian Basin Regional Planning Commission  
Consultant Name: Terracon Consultants Inc  
Street Address: 6911 Blanco Road  
City: San Antonio  
State: TEXAS  
Zip Code: 78216  
Phone: 210-641-2112  
Email: jaaguilar@terracon.com

Structure Type: GTOWER - Guyed Tower  
Latitude: 32 deg 30 min 13.6 sec N  
Longitude: 102 deg 16 min 41.7 sec W  
Location Description: 9435 E St Hwy 115  
City: Andrews  
State: TEXAS  
County: ANDREWS  
Ground Elevation: 914.4 meters  
Support Structure: 146.3 meters above ground level  
Overall Structure: 146.3 meters above ground level  
Overall Height AMSL: 1060.7 meters above mean sea level

Reply to Proposed Tower Structure (Notification ID 73983) - Email ID #2736788.txt  
From: towernotifyinfo@fcc.gov  
Sent: Friday, February 25, 2011 2:43 PM  
To: Aguilar, Julio A  
Cc: tcns.fccarchive@fcc.gov; jwaffle@tonkawatribe.com  
Subject: Reply to Proposed Tower Structure (Notification ID: 73983) - Email ID #2736788

Dear Terracon Consultants Inc,

Thank you for using the Federal Communications Commission's (FCC) Tower Construction Notification System (TCNS). The purpose of this email is to inform you that an authorized user of the TCNS has replied to a proposed tower construction notification that you had submitted through the TCNS.

The following message has been sent to you from Tribal Administrator Joshua Waffle of the Tonkawa Tribe in reference to Notification ID #73983:

The following site(s) have been reviewed and to date (Friday, February 25, 2011) with current resources, the Tonkawa Tribe has no known burial sites of the Tonkawa Indians. If any remains or artifacts are discovered please contact the appropriate Agencies and our Tribal Facilities immediately. If the Tonkawa Tribes databases change in regards to the statement in this letter, a Tribal Representative will contact you.

Respectfully,  
Joshua Waffle  
Tribal Administrator Tonkawa Tribe  
Ph 580 628 2561 124  
Fx 580 628 3375  
Cl 580 491 1209  
jwaffle@tonkawatribe.com

For your convenience, the information you submitted for this notification is detailed below.

Notification Received: 02/21/2011  
Notification ID: 73983  
Tower Owner Individual or Entity Name: Permian Basin Regional Planning Commission  
Consultant Name: Terracon Consultants Inc  
Street Address: 6911 Blanco Road  
City: San Antonio  
State: TEXAS  
Zip Code: 78216  
Phone: 210-641-2112  
Email: jaaguilar@terracon.com

Structure Type: GTOWER - Guyed Tower  
Latitude: 32 deg 30 min 13.6 sec N  
Longitude: 102 deg 16 min 41.7 sec W  
Location Description: 9435 E St Hwy 115  
City: Andrews  
State: TEXAS  
County: ANDREWS  
Ground Elevation: 914.4 meters  
Support Structure: 146.3 meters above ground level  
Overall Structure: 146.3 meters above ground level  
Overall Height AMSL: 1060.7 meters above mean sea level

Reply to Proposed Tower Structure (Notification ID 73983) - Email ID #2735178.txt  
From: towernotifyinfo@fcc.gov  
Sent: Wednesday, February 23, 2011 5:46 PM  
To: Aguilar, Julio A  
Cc: tcns.fccarchive@fcc.gov; jloera@ydsp-nsn.gov  
Subject: Reply to Proposed Tower Structure (Notification ID: 73983) - Email ID #2735178

Dear Terracon Consultants Inc,

Thank you for using the Federal Communications Commission's (FCC) Tower Construction Notification System (TCNS). The purpose of this email is to inform you that an authorized user of the TCNS has replied to a proposed tower construction notification that you had submitted through the TCNS.

The following message has been sent to you from THPO Javier Loera of the Ysleta del Sur Pueblo in reference to Notification ID #73983:

We have no interest in this site. However, if the Applicant discovers archaeological remains or resources during construction, the Applicant should immediately stop construction and notify the appropriate Federal Agency and the Tribe.

For your convenience, the information you submitted for this notification is detailed below.

Notification Received: 02/21/2011  
Notification ID: 73983  
Tower Owner Individual or Entity Name: Permian Basin Regional Planning Commission  
Consultant Name: Terracon Consultants Inc  
Street Address: 6911 Blanco Road  
City: San Antonio  
State: TEXAS  
Zip Code: 78216  
Phone: 210-641-2112  
Email: jaaguilar@terracon.com

Structure Type: GTOWER - Guyed Tower  
Latitude: 32 deg 30 min 13.6 sec N  
Longitude: 102 deg 16 min 41.7 sec W  
Location Description: 9435 E St Hwy 115  
City: Andrews  
State: TEXAS  
County: ANDREWS  
Ground Elevation: 914.4 meters  
Support Structure: 146.3 meters above ground level  
Overall Structure: 146.3 meters above ground level  
Overall Height AMSL: 1060.7 meters above mean sea level

**APPENDIX C**  
**FCC NEPA Land Use Compliance Checklist**

## NEPA Land Use Compliance Checklist

<b>Site Type (choose one):</b> <input checked="" type="checkbox"/> Raw land <input type="checkbox"/> Tower collocation* <input type="checkbox"/> Other collocation*	<b>Site Name &amp; Address:</b> Andrews Tower Site 9435 E State Highway 115 (Approximately 20 miles NE of Andrews, TX on Highway 115) Andrews, Andrews County, Texas	<b>Coordinates (NAD 83):</b>  Lat: 32° 30' 13.6" Long: 102° 16' 41.7"			
NEPA Category	Expert Federal / State Jurisdictional Agencies	Check appropriate box(es) below			
		No Adverse Impact	Potential Adverse Impact	Categorically Excluded from Review*	Collocation Agreement or NPA Applies
1. Designated Wilderness Areas	National Park Service, US Forest Service, Bureau of Land Management (BLM)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Designated Wildlife Preserves	National Park Service, US Forest Service, BLM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Threatened or Endangered Species & Critical Habitats	US Fish & Wildlife Service - Field Office (USF&WS)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Historic Places	State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Collo Agreement <input type="checkbox"/> NPA <input type="checkbox"/>
5. Indian Sites of Religious and Cultural Significance	American Indian Tribes, Bureau of Indian Affairs, THPO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Floodplain	Federal Emergency Management Agency (FEMA)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Wetlands, Deforestation & Surface Waterways	US Army Corps of Engineers (ACOE)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. High Intensity White Lights in Residential Neighborhoods	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

\*For collocations, NEPA Land Use Screening Category 4 only is required. The remaining categories are categorically excluded.

The undersigned had reviewed and approved the completion of this NEPA Checklist for the above-mentioned site.

Prepared by: Terracon, 6911 Blanco Road, San Antonio, Texas, 210-641-2112

Signature: \_\_\_\_\_ Title: Environmental Scientist

Printed Name: Julio A. Aguilar Date: May 4, 2011